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NEWS 4 OCT 07 Multiple databases enhanced for more flexible patent number searching
NEWS 5 OCT 22 Current-awareness alert (SDI) setup and editing enhanced
NEWS 6 OCT 22 WPIDS, WPINDEX, and WPIX enhanced with Canadian PCT Applications
NEWS 7 OCT 24 CHEMLIST enhanced with intermediate list of pre-registered REACH substances
NEWS 8 NOV 21 CAS patent coverage to include exemplified prophetic substances identified in English-, French-, German-, and Japanese-language basic patents from 2004-present
NEWS 9 NOV 26 MARPAT enhanced with FSORT command
NEWS 10 NOV 26 MEDLINE year-end processing temporarily halts availability of new fully-indexed citations
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NEWS 12 NOV 26 Two new SET commands increase convenience of STN searching
NEWS 13 DEC 01 ChemPort single article sales feature unavailable
NEWS 14 DEC 12 GBFULL now offers single source for full-text coverage of complete UK patent families
NEWS 15 DEC 17 Fifty-one pharmaceutical ingredients added to PS

NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3,
AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

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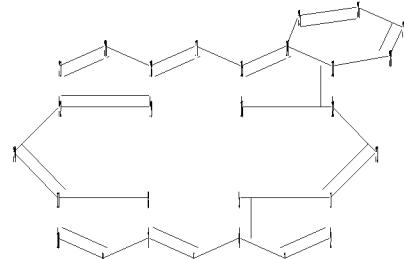
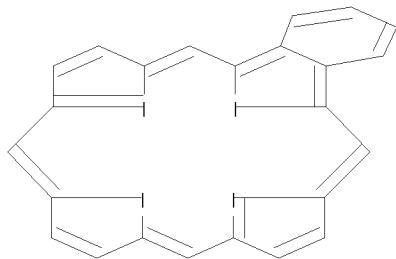
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<http://www.cas.org/support/stngen/stndoc/properties.html>

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ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
24 25 26 27 28
ring bonds :
1-2 1-5 1-23 2-3 3-4 4-5 4-6 6-7 7-8 7-9 8-11 9-10 10-11 11-24 12-13
12-16 12-23 13-14 13-28 14-15 14-25 15-16 15-17 17-18 18-19 18-20 19-22
20-21 21-22 22-24 25-26 26-27 27-28
exact/norm bonds :
7-8 8-11 12-16 15-16
normalized bonds :

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1-2 1-5 1-23 2-3 3-4 4-5 4-6 6-7 7-9 9-10 10-11 11-24 12-13 12-23
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25-26 26-27 27-28

Match level :

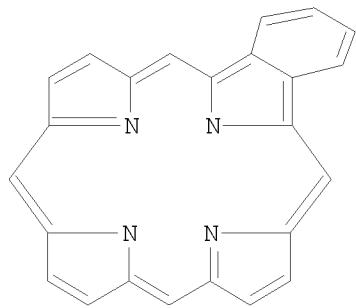
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11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom
20:Atom 21:Atom 22:Atom 23:Atom 24:Atom 25:Atom 26:Atom 27:Atom 28:Atom

L1 STRUCTURE UPLOADED

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L1 HAS NO ANSWERS

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Structure attributes must be viewed using STN Express query preparation.

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SAMPLE SEARCH INITIATED 10:37:45 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 799 TO ITERATE

100.0% PROCESSED 799 ITERATIONS 50 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 14285 TO 17675
PROJECTED ANSWERS: 849 TO 1831

L2 50 SEA SSS SAM L1

=> l1 full
FULL SEARCH INITIATED 10:37:50 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 15629 TO ITERATE

100.0% PROCESSED 15629 ITERATIONS 1509 ANSWERS
SEARCH TIME: 00.00.01

L3 1509 SEA SSS FUL L1

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FILE 'CAPLUS' ENTERED AT 10:37:53 ON 19 DEC 2008
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FILE COVERS 1907 - 19 Dec 2008 VOL 149 ISS 26
FILE LAST UPDATED: 18 Dec 2008 (20081218/ED)

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<http://www.cas.org/legal/infopolicy.html>

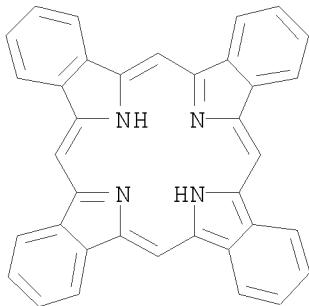
=> 13
L4 948 L3

=> 14 and transistor
111724 TRANSISTOR
L5 26 L4 AND TRANSISTOR

=> d ibib abs hitstr 1-26

L5 ANSWER 1 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2008:1304565 CAPLUS
DOCUMENT NUMBER: 149:502692
TITLE: Organic electroluminescence devices and their displays
INVENTOR(S): Yoshida, Hidehiro; Kanegae, Arinobu; Nakaya, Shuhei;
Omae, Hideki
PATENT ASSIGNEE(S): Matsushita Electric Industrial Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 13pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2008261954	A	20081030	JP 2007-103238	20070410
PRIORITY APPLN. INFO.:				
AB	Title devices have pixel electrodes laminated with source or drain electrodes of transistors. Are also claimed, the devices having organic luminescence transistors and transistors for switches. Because the laminated structures decrease areas of the transistors, high aperture ratio is achieved, providing flexible displays.			
IT	52952-31-5, Tetrabenzoporphyrin RL: TEM (Technical or engineered material use); USES (Uses) (gate electrode; flexible high-aperture-ratio organic electroluminescence displays having pixel electrodes laminated with transistor electrodes)			
RN	52952-31-5 CAPLUS			
CN	29H,31H-Tetrabenzo[b,g,l,q]porphine (CA INDEX NAME)			



L5 ANSWER 2 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2008:1279269 CAPLUS
 DOCUMENT NUMBER: 149:460807
 TITLE: Organic thin film transistor and its manufacture by printing
 INVENTOR(S): Miyai, Mitsuyoshi
 PATENT ASSIGNEE(S): Konica Minolta Holdings, Inc., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 16pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2008258252	A	20081023	JP 2007-96183	20070402
PRIORITY APPLN. INFO.:				
AB	The organic TFT is equipped with a gate electrode, gate insulating layer, source electrode, drain electrode, and organic semiconductor layer formed on a substrate, where the source electrode and/or drain electrode have a porous film of an inorg. conductor in which an organic conductor or organic semiconductor is impregnated. The manufacture process comprises following steps: printing a dispersion solution of the inorg. conductor on the substrate, evaporating a solvent of the solution to form the porous film, printing			

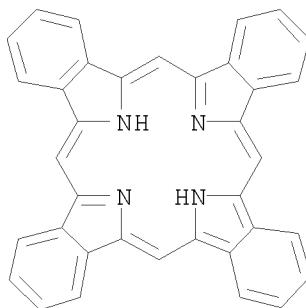
a solution or dispersion of an electrode material to impregnate into the porous film. The organic TFT provides uniform current characteristics and high temperature durability.

IT 52952-31-5, Tetrabenzoporphyrin

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(organic thin film transistor manufactured by printing on porous inorg. electrode)

RN 52952-31-5 CAPLUS

CN 29H,31H-Tetrabenz[b,g,l,q]porphine (CA INDEX NAME)



L5 ANSWER 3 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2008:1185412 CAPLUS

DOCUMENT NUMBER: 149:437611

TITLE: Process for producing organic transistor and organic transistor

INVENTOR(S): Ohta, Satoru

PATENT ASSIGNEE(S): Pioneer Corporation, Japan

SOURCE: PCT Int. Appl., 21pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

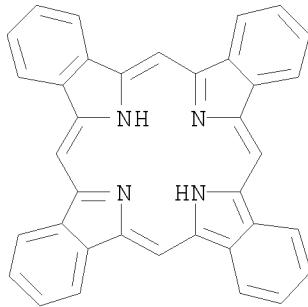
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2008117450	A1	20081002	WO 2007-JP56425	20070327
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
PRIORITY APPLN. INFO.:			WO 2007-JP56425	20070327
AB A process for producing an organic transistor realizing less shift				

of threshold voltage, including paired source electrode and drain electrode, an organic semiconductor layer for forming a channel between the source electrode and the drain electrode and, laid on the organic semiconductor layer, a gate insulating film and gate electrode, comprises forming a porphyrin compound into a film to form the organic semiconductor layer and simultaneously forming a siloxane compound or silazane compound into a film and hardening the same to give the gate insulating film.

IT 52952-31-5, Tetrabenzoporphyrin
RL: TEM (Technical or engineered material use); USES (Uses)
(process for producing organic transistor and organic transistor)
RN 52952-31-5 CAPLUS
CN 29H,31H-Tetrabenzo[b,g,l,q]porphine (CA INDEX NAME)



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

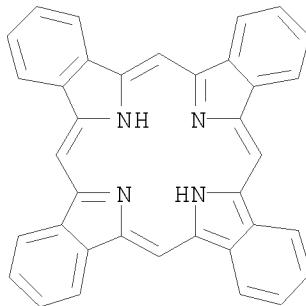
L5 ANSWER 4 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2008:626889 CAPLUS
DOCUMENT NUMBER: 149:545947
TITLE: Factors influencing local potential drop in bottom-contact organic thin-film transistor using solution-processible tetrabenzoporphyrin
AUTHOR(S): Xu, Mingsheng; Ohno, Akira; Aramaki, Shinji; Kudo, Kazuhiro; Nakamura, Masakazu
CORPORATE SOURCE: Venture Business Laboratory, Chiba University, 1-33 Yayoi-cho, Inage-ku, Chiba, 263-8522, Japan
SOURCE: Organic Electronics (2008), 9(4), 439-444
CODEN: OERLAU; ISSN: 1566-1199
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB By exploiting atomic-force-microscope potentiometry, we have studied the local potential distribution in the solution-processible tetrabenzoporphyrin (BP) bottom-contact thin-film transistor under controlled atmospheres. It is found that abrupt and big potential drops mainly appeared at the domain boundaries and cracks in the BP film when the transistor was under operation, indicating a dominant influence of domain boundary and crack on the device performance. Exposure of the device to O₂ drastically reduced the potential drops at some boundaries, which is the main reason for the improved device performance by O₂ exposure.
IT 52952-31-5, Tetrabenzoporphyrin

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(factors influencing local potential drop in bottom-contact organic thin-film transistor using solution-processible tetrabenzoporphyrin)

RN 52952-31-5 CAPLUS

CN 29H,31H-Tetrabenz[*b,g,l,q*]porphine (CA INDEX NAME)



REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2008:190783 CAPLUS

DOCUMENT NUMBER: 148:225814

TITLE: Method for manufacturing a thin film transistor array panel

INVENTOR(S): Shin, Jung-Han; Kim, Bo-Sung; Shin, Seong-Sik

PATENT ASSIGNEE(S): Samsung Electronics Co., Ltd., S. Korea

SOURCE: U.S. Pat. Appl. Publ., 25pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20080038867	A1	20080214	US 2007-745722	20070508
KR 2008013297	A	20080213	KR 2006-74638	20060808
PRIORITY APPLN. INFO.:			KR 2006-74638	A 20060808

AB A method of fabricating a thin film transistor array panel is described entailing forming a gate electrode, forming a source electrode and a drain electrode opposing each other and separated from each other on the gate electrode, forming a gate insulator on the gate electrode, forming an organic semiconductor on the gate insulator, and forming a passivation member covering the organic semiconductor, wherein the source and drain electrodes contact the organic semiconductor, and an ink-jet printing process is used to form at least two among the gate insulator, the organic semiconductor, and the passivation member, and wherein a mixed solvent including at least two among a gate insulator material, an organic semiconductor material, and a passivation member material is sprayed in the ink-jet printing process.

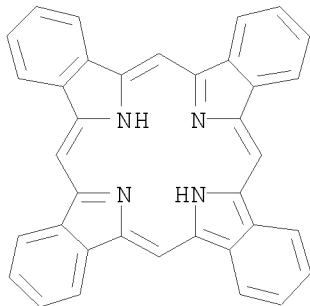
IT 52952-31-5, Tetrabenzoporphyrin

RL: TEM (Technical or engineered material use); USES (Uses)

(organic semiconductor; thin film transistor array panel having organic films formed by simplified ink-jet printing)

RN 52952-31-5 CAPLUS

CN 29H,31H-Tetrabenzo[b,g,l,q]porphine (CA INDEX NAME)



L5 ANSWER 6 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2007:1231043 CAPLUS

DOCUMENT NUMBER: 148:89975

TITLE: Metal-insulator transition in solution-processible porphyrinic field-effect transistors

AUTHOR(S): Dhoot, Anoop S.; Aramaki, Shinji; Moses, Daniel; Heeger, Alan J.

CORPORATE SOURCE: Center for Polymers and Organic Solids and Mitsubishi Chemical Center for Advanced Materials, University of California, Santa Barbara, CA, 93106, USA

SOURCE: Advanced Materials (Weinheim, Germany) (2007), 19(19), 2914-2918

PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The charge carrier transport in solution-processible copper tetrabenzoporphyrin field-effect transistors (FETs) was studied and characterized between room temperature and 4.2 K. The insulator-to-metal transition is reached at a carrier d. of $3 + 10^{12}$ cm⁻², approx. independent of the source-drain voltage.

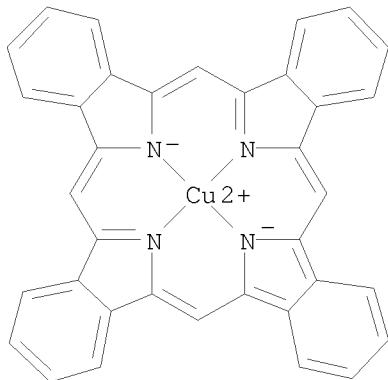
IT 21519-18-6

RL: PRP (Properties)

(metal-insulator transition in solution-processible copper tetrabenzoporphyrin porphyrinic field-effect transistors)

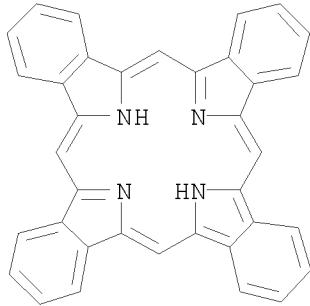
RN 21519-18-6 CAPLUS

CN Copper, [29H,31H-tetrabenzo[b,g,l,q]porphinato(2-)-κN29,κN30,κN31,κN32]-, (SP-4-1)- (CA INDEX NAME)



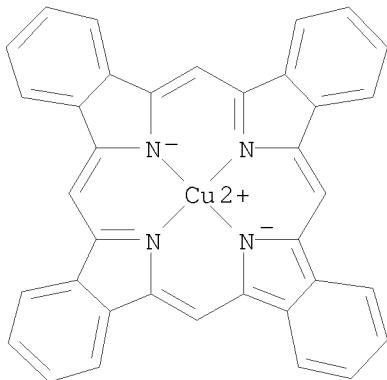
REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 7 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2007:688417 CAPLUS
DOCUMENT NUMBER: 147:155136
TITLE: Polycrystalline tetrabenzoporphyrin organic field-effect transistors with nanostructured channels
AUTHOR(S): Shea, Patrick B.; Chen, Charlene; Kanicki, Jerzy; Pattison, Lisa R.; Petroff, Pierre; Yamada, Hiroko; Ono, Noboru
CORPORATE SOURCE: Organic and Molecular Electronics Laboratory, Department of Electrical Engineering and Computer Science, The University of Michigan, Ann Arbor, MI, 48109, USA
SOURCE: Applied Physics Letters (2007), 90(23), 233107/1-233107/3
CODEN: APPLAB; ISSN: 0003-6951
PUBLISHER: American Institute of Physics
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Solution-processed organic thin-film field-effect transistors were fabricated using a precursor form of the organic semiconductor tetrabenzoporphyrin (TBP) deposited on a thermal silicon oxide gate insulator patterned with nanometer-scale trenches. Thermal conversion of the precursor film to TBP was enhanced by ordered TBP aggregation in the prepatterned trenches, demonstrating precise control and placement of long- and short-range ordering of the organic semiconductor. Organic thin-film field-effect transistors with channels parallel to trench direction growth were found to have field-effect mobility approaching one order of magnitude greater than transistors fabricated with the channel oriented perpendicular to dendrimer growth.
IT 52952-31-5, Tetrabenzoporphyrin
RL: TEM (Technical or engineered material use); USES (Uses) (fabrication and characteristics of polycryst. tetrabenzoporphyrin organic field-effect transistors with nanostructured channels)
RN 52952-31-5 CAPLUS
CN 29H,31H-Tetrabenzo[b,g,l,q]porphine (CA INDEX NAME)



REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

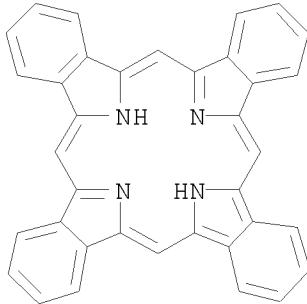
L5 ANSWER 8 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2007:518416 CAPLUS
DOCUMENT NUMBER: 147:155101
TITLE: Solution-processed polycrystalline copper tetrabenzoporphyrin thin-film transistors
AUTHOR(S): Shea, Patrick B.; Pattison, Lisa R.; Kawano, Manami; Chen, Charlene; Chen, Jihua; Petroff, Pierre; Martin, David C.; Yamada, Hiroko; Ono, Noboru; Kanicki, Jerzy
CORPORATE SOURCE: Organic & Molecular Electronics Laboratory, Department of Electrical Engineering & Computer Science, The University of Michigan, Ann Arbor, MI, 48109-2108, USA
SOURCE: Synthetic Metals (2007), 157(4-5), 190-197
CODEN: SYMEDZ; ISSN: 0379-6779
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The demonstration of organic thin-film field-effect transistors (OFETs) using a solution-processable form of the organometallic mol. copper tetrabenzoporphyrin (CuTBP) is reported. A soluble precursor was spun-cast into an amorphous, insulating thin-film, and thermally annealed at 165°C for 30 min into a polycryst. organic semiconductor. Absorbance spectroscopy displayed characteristics of porphyrin macrocycles. Microscopy reveals the formation of domains comprising aligned nanorod aggregates with dimensions of 55 nm wide, 300 nm long, and 100 nm tall on the gate insulator surface. OFETs demonstrated field-effect mobilities typically on the order of 0.1 cm²/V s, threshold voltages around 5 V, subthreshold slopes around 4 V/dec, and ON-/OFF-current ratios near 104.
IT 21519-18-6P
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(solution-processed polycryst. copper tetrabenzoporphyrin thin-film transistors)
RN 21519-18-6 CAPLUS
CN Copper, [29H,31H-tetrabenzo[b,g,l,q]porphinato(2-)-κN29,κN30,κN31,κN32]-, (SP-4-1)- (CA INDEX NAME)



REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 9 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2006:1311691 CAPLUS
 DOCUMENT NUMBER: 146:53634
 TITLE: Fabrication of organic semiconductor thin film,
 organic semiconductor thin film, organic electronic
 device, and organic field-effect transistor
 INVENTOR(S): Yoshiyama, Ryuichi; Aramaki, Shinji; Sakai, Yoshitada
 PATENT ASSIGNEE(S): Mitsubishi Chemical Corp., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 19pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006339604	A	20061214	JP 2005-165922	20050606
PRIORITY APPLN. INFO.:				
AB	A method for fabricating an organic semiconductor thin film having a large grain size involves preparing an organic semiconductor precursor thin film having a structure for forming a double bond upon a reaction and converting the precursor thin film to a semiconductor thin film while moving a system having a temperature gradient d ($^{\circ}\text{C}/\text{mm}$) at a moving rate x (mm/s) to satisfy an equation $0.001 < xd < 1000$.			
IT	52952-31-5P, 29H,31H-Tetrabenzo[b,g,l,q]porphine RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (fabrication of organic semiconductor thin film having large grain size, organic semiconductor thin film, organic electronic device, and organic field-effect transistor)			
RN	52952-31-5 CAPLUS			
CN	29H,31H-Tetrabenzo[b,g,l,q]porphine (CA INDEX NAME)			



L5 ANSWER 10 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2006:1012378 CAPLUS
 DOCUMENT NUMBER: 145:387605
 TITLE: Organic semiconductor device, field-effect transistor, and their manufacturing methods
 INVENTOR(S): Nakayama, Tomonari; Ohnishi, Toshinobu; Miura, Daisuke
 PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Japan
 SOURCE: U.S. Pat. Appl. Publ., 25pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 20060214159	A1	20060928	US 2006-373966	20060314
JP 2006303465	A	20061102	JP 2006-75618	20060317

PRIORITY APPLN. INFO.: JP 2005-88938 A 20050325

AB An organic semiconductor device is provided which includes an organic semiconductor layer and an insulating layer. The insulating layer is made of a cured material formed from a composition containing a resin and a crosslinking

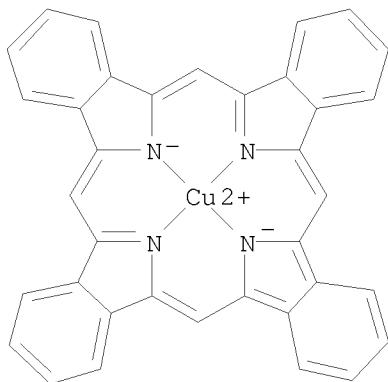
agent. The resin contains an organic resin having a hydroxyl group. The crosslinking agent contains a compound having at least two crosslinking groups. At least one of the crosslinking groups is a methylol group or an NH group. The composition contains the crosslinking agent at 15-45% by weight relative to 100 parts by weight in total of the resin and the crosslinking agent.

IT 21519-18-6 52952-31-5,
 29H,31H-Tetrabenzo[b,g,l,q]porphine
 RL: PRP (Properties); TEM (Technical or engineered material use); USES
 (Uses)

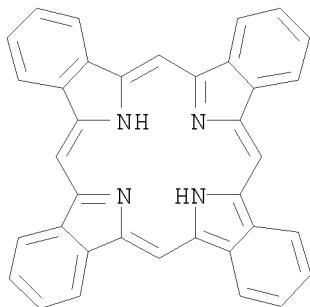
(organic semiconductor device snf field-effect transistor on
 insulating layer substrate)

RN 21519-18-6 CAPLUS

CN Copper, [29H,31H-tetrabenzo[b,g,l,q]porphinato(2-) -
 κN29,κN30,κN31,κN32]-, (SP-4-1)- (CA INDEX NAME)



RN 52952-31-5 CAPLUS
CN 29H,31H-Tetrabenzo[b,g,l,q]porphine (CA INDEX NAME)



L5 ANSWER 11 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2006:949745 CAPLUS
DOCUMENT NUMBER: 145:326413
TITLE: Manufacture of organic field-effect transistors
INVENTOR(S): Aramaki, Shinji; Sakai, Yoshitada; Yoshiyama, Ryuichi
PATENT ASSIGNEE(S): Mitsubishi Chemical Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 26pp.

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

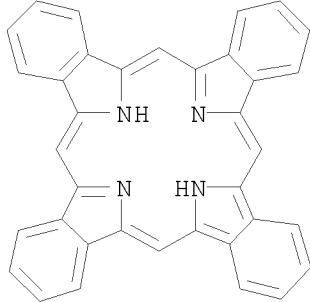
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2006245559	A	20060914	JP 2006-27498	20060203

PRIORITY APPLN. INFO.: JP 2005-30896 A 20050207

AB The FETs contain, on substrates, organic semiconductor layers from compds. having aza-annulene structure, and mercapto-group-containing layers on ≥1 side of the semiconductor layers. The FETs have high threshold voltage and excellent ON/OFF ratio.

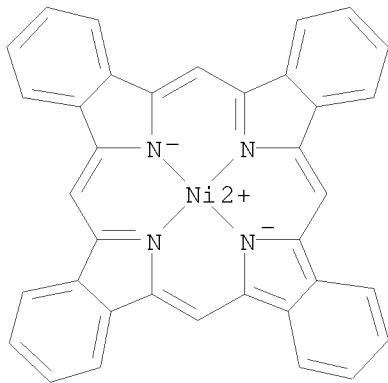
IT 52952-31-5, Tetrabenzoporphyrin

RL: DEV (Device component use); USES (Uses)
(manufacture of organic FETs containing semiconductor layers from compds.
containing
az-a-annulene structure)
RN 52952-31-5 CAPLUS
CN 29H,31H-Tetrabenzo[b,g,l,q]porphine (CA INDEX NAME)

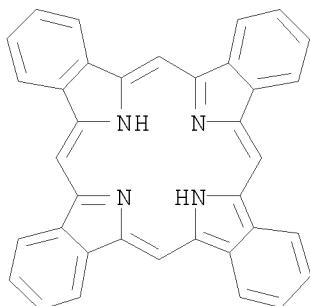


L5 ANSWER 12 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2006:839022 CAPLUS
DOCUMENT NUMBER: 145:446992
TITLE: Solution-processed nickel tetrabenzoporphyrin thin-film transistors
AUTHOR(S): Shea, Patrick B.; Kanicki, Jerzy; Pattison, Lisa R.; Petroff, Pierre; Kawano, Manami; Yamada, Hiroko; Ono, Noboru
CORPORATE SOURCE: Organic and Molecular Electronics Laboratory, Department of Electrical Engineering and Computer Science, The University of Michigan, Ann Arbor, MI, 48109, USA
SOURCE: Journal of Applied Physics (2006), 100(3), 034502/1-034502/7
CODEN: JAPIAU; ISSN: 0021-8979
PUBLISHER: American Institute of Physics
DOCUMENT TYPE: Journal
LANGUAGE: English
AB We describe Ni tetrabenzoporphyrin (NiTBP) as a solution-processible organic semiconductor. Whereas porphyrins in an unmodified state are typically planar and insol., a precursor synthetic route (NiCP) was used to deposit thin films via solution. Amorphous, insulating thin films of NiCP were deposited, and thermally converted to polycryst., semiconducting NiTBP. Films were studied using optical absorption and microscopy, atomic force microscopy, and x-ray diffraction. Highly concentrated NiCP was shown to form large, needle-shaped crystals drop-cast from solution. NiTBP thin-film field-effect transistors fabricated from spun-cast films demonstrated charge-carrier field-effect mobilities on the order of 0.1 and 0.2 cm²/V s and accumulation threshold voltages of -19 and -13, in the linear and saturation regimes, resp.
IT 71163-07-0P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(Ni tetrabenzoporphyrin thin-film transistors)
RN 71163-07-0 CAPLUS
CN Nickel, [29H,31H-tetrabenzo[b,g,l,q]porphinato(2-)-

κ N29, κ N30, κ N31, κ N32]-, (SP-4-1)- (CA INDEX NAME)



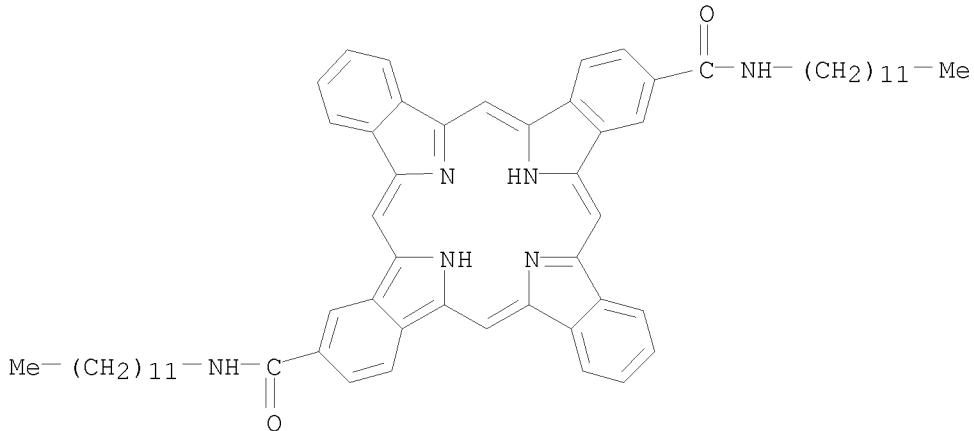
IT 52952-31-5, Tetrabenzoporphyrin
RL: RCT (Reactant); RACT (Reactant or reagent)
(Ni tetrabenzoporphyrin thin-film transistors)
RN 52952-31-5 CAPLUS
CN 29H,31H-Tetrabenzo[b,g,l,q]porphine (CA INDEX NAME)



REFERENCE COUNT: 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 13 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2006:794423 CAPLUS
DOCUMENT NUMBER: 145:222853
TITLE: Organic semiconductor materials, organic thin film transistors, field-effect transistors (FET), and switching elements
INVENTOR(S): Tanaka, Tatsuo
PATENT ASSIGNEE(S): Konica Minolta Holdings, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 30pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006210475	A	20060810	JP 2005-17898	20050126
PRIORITY APPLN. INFO.:			JP 2005-17898	20050126
AB	Organic semiconductors containing compds. having a dye skeleton and that are not organic complexes are claimed. Preferably, the compds. are DRn(D = dye skeleton; R = dissolving unit; n = integer of ≥ 1), (poly)methine dyes, cyanine dyes, merocyanine dyes, oxonol dyes, styryl dyes, (hetero)arylidene dyes, azo dyes, or azomethine dyes. Organic thin film transistors, field-effect transistors (FET), and switching elements comprising the said semiconductors are also claimed. The materials show long service life.			
IT	904665-50-5 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses) (organic semiconductors; organic dye semiconductors for TFT, FET, and switching elements)			
RN	904665-50-5 CAPLUS			
CN	29H,31H-Tetrabenzo[b,g,l,q]porphine-2,16-dicarboxamide, N,N'-didodecyl- (9CI) (CA INDEX NAME)			



L5 ANSWER 14 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2006:91919 CAPLUS
 DOCUMENT NUMBER: 145:387119
 TITLE: High performance porphyrin semiconductor for transistor applications
 AUTHOR(S): Aramaki, Shinji; Yoshiyama, Ruichi; Sakai, Masayoshi; Ono, Noboru
 CORPORATE SOURCE: Mitsubishi Chemical Group Science & Technology Research Center, Inc., 1000 Kamoshida-cho, Aoba-ku, Yokohama, 227-8502, Japan
 SOURCE: Digest of Technical Papers - Society for Information Display International Symposium (2005), 36(Bk. 1), 296-299
 CODEN: DTPSDS
 PUBLISHER: Society for Information Display
 DOCUMENT TYPE: Journal

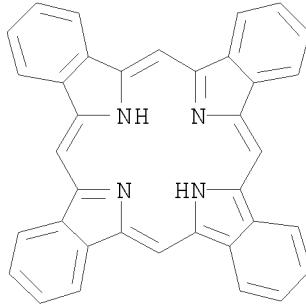
LANGUAGE: English

AB Various porphyrin compds. were investigated for solution-processible semiconductors for transistor applications. Some show excellent semiconductor properties. Their films can be formed by solution-process, i.e., by thermal conversion of their precursor film coated from their solution. Some porphyrin compds. show good semiconductor performance in terms of mobility and long-term driving stability.

IT 52952-31-5, 29H,31H-Tetrabenzo[b,g,l,q]porphine
52952-31-5D, 29H,31H-Tetrabenzo[b,g,l,q]porphine, divalent metal complexes 910923-74-9
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process); USES (Uses)
(high performance porphyrin semiconductor for transistor applications)

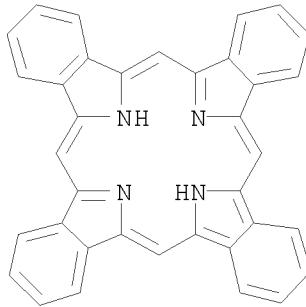
RN 52952-31-5 CAPPLUS

CN 29H,31H-Tetrabenzo[b,g,l,q]porphine (CA INDEX NAME)



RN 52952-31-5 CAPPLUS

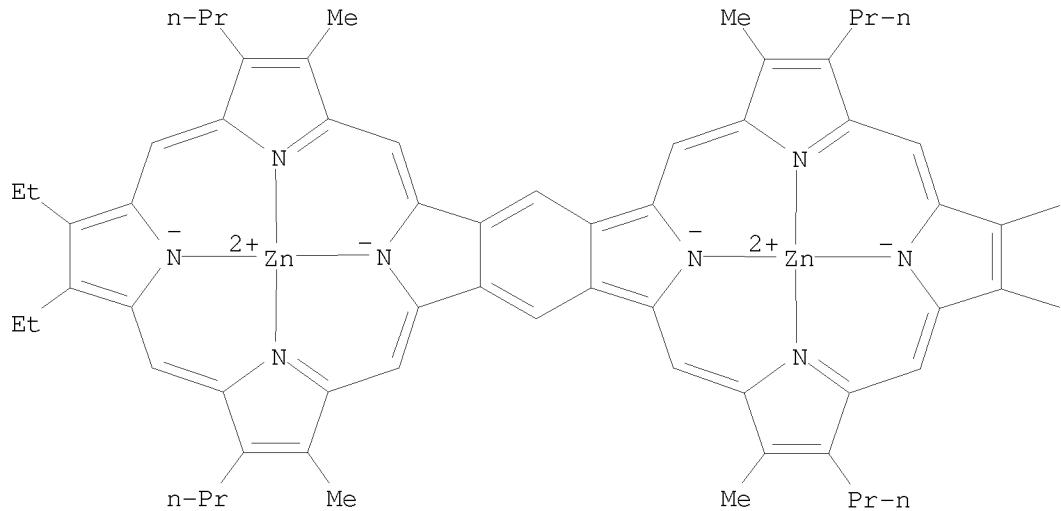
CN 29H,31H-Tetrabenzo[b,g,l,q]porphine (CA INDEX NAME)



RN 910923-74-9 CAPPLUS

CN Zinc, [μ-[9,10,28,29-tetraethyl-4,15,23,34-tetramethyl-5,14,24,33-tetrapropyl-39H,41H,43H,45H-benzo[1,2-b:4,5-b']diporphinato(4-)κN39,κN40,κN41,κN42:κN43,κN44,κN45,κN46]]di- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

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REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 15 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:1334762 CAPLUS

DOCUMENT NUMBER: 144:79408

TITLE: Field effect transistor and production process thereof

INVENTOR(S): Nakayama, Tomonari; Ohnishi, Toshinobu; Kubota, Makoto

PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Japan

SOURCE: PCT Int. Appl., 44 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

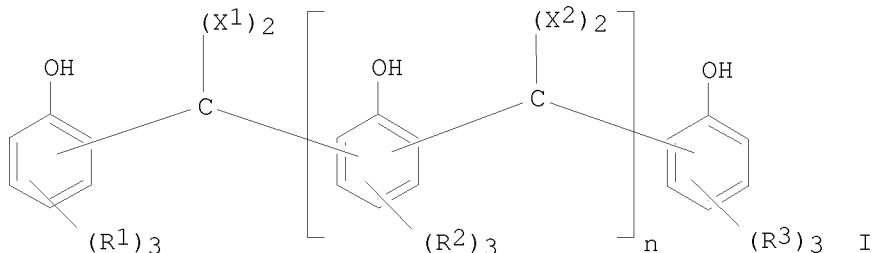
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005122279	A1	20051222	WO 2005-JP10995	20050609
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2005354012	A	20051222	JP 2004-176130	20040614
US 20070096079	A1	20070503	US 2005-559799	20051208
PRIORITY APPLN. INFO.:			JP 2004-176130	A 20040614
			WO 2005-JP10995	W 20050609

GI



AB Title field effect transistor includes a substrate, an organic semiconductor layer, an insulating layer, and conductive layers, wherein the insulating layer comprises a cured product of a phenol resin represented by the following general formula (I): (R₁, R₂ and R₃ each represent hydrogen atom, halogen atom, hydroxymethyl group, alkyl group having 1 to 12 carbon atoms, alkenyl group, alkinyl group, alkoxy group, alkylthio group, or alkyl ester group, X₁ and X₂ each represent hydrogen atom, alkyl group having 1 to 12 carbon atoms, alkenyl group, alkinyl group, or aryl group, and n represents an integer of 0 to 2,000). According to the present invention, a field effect transistor capable of smoothening the gate electrode having a low surface smoothness, in which a current leak to the gate electrode is small can be obtained.

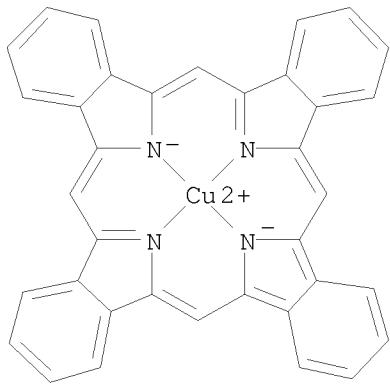
IT 21519-18-6, Copper tetrabenzoporphine

RL: DEV (Device component use); USES (Uses)

(semiconducting layer-containing; production of field effect transistor containing phenolic resin insulating layer)

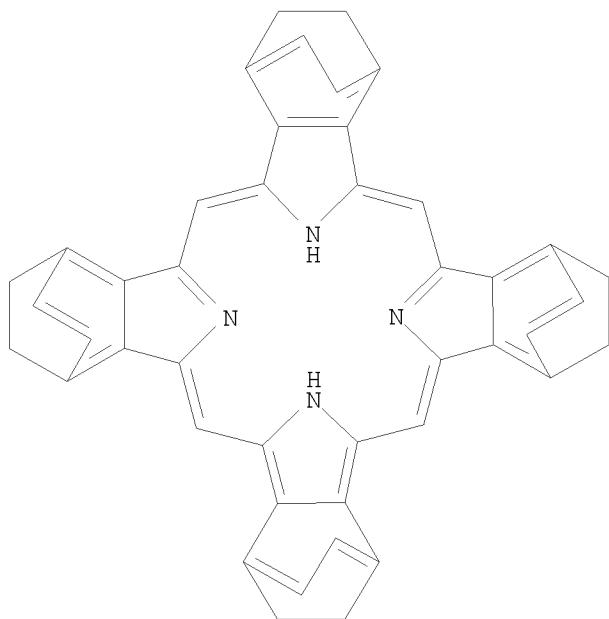
RN 21519-18-6 CAPLUS

CN Copper, [29H,31H-tetrabenzo[b,g,l,q]porphinato(2-)-
 κN29,κN30,κN31,κN32]-, (SP-4-1)- (CA INDEX NAME)



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

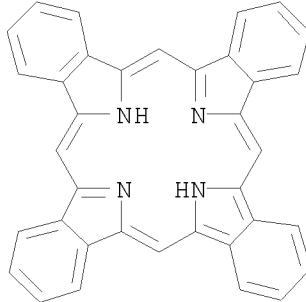
L5 ANSWER 16 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:1187544 CAPLUS
DOCUMENT NUMBER: 144:43821
TITLE: Methanofullerene-coated tetrabenzoporphyrin organic field-effect transistors
AUTHOR(S): Shea, Patrick B.; Kanicki, Jerzy; Cao, Yong; Ono, Noboru
CORPORATE SOURCE: Organic and Molecular Electronics Laboratory, Department of Electrical Engineering and Computer Science, The University of Michigan, Ann Arbor, MI, 48109, USA
SOURCE: Applied Physics Letters (2005), 87(17), 173506/1-173506/3
CODEN: APPLAB; ISSN: 0003-6951
PUBLISHER: American Institute of Physics
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Organic field-effect transistors (OFETs) using a solution-processable form of the organic semiconductor tetrabenzoporphyrin were fabricated with a top coating of a soluble n-type organic semiconductor. The top coating was found to extend the lifetime of the device in that the field-effect mobility, subthreshold slope, and OFF-state current were maintained at or near their as-fabricated states. O doping by extended air exposure was effectively slowed by the electron-accepting coating layer. Coated devices also display a transfer characteristic indicative of a parasitic latch-up transistor formed at the back channel of the OFETs.
IT 201739-37-9
RL: PRP (Properties)
(CP; methanofullerene-coated tetrabenzoporphyrin organic field-effect transistors)
RN 201739-37-9 CAPLUS
CN 1,4:8,11:15,18:22,25-Tetraethano-29H,31H-tetrabenzo[b,g,l,q]porphine (9CI)
(CA INDEX NAME)



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 17 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:682827 CAPLUS
DOCUMENT NUMBER: 143:397071
TITLE: Electrical properties of staggered electrode,
solution-processed, polycrystalline
tetrabenzoporphyrin field-effect transistors
Shea, Patrick B.; Johnson, Aaron R.; Ono, Noboru;
Kanicki, Jerzy
AUTHOR(S):
CORPORATE SOURCE: Department of Electrical Engineering and Computer
Science, The University of Michigan, Ann Arbor, MI,
48109, USA
SOURCE: IEEE Transactions on Electron Devices (2005), 52(7),
1497-1503
CODEN: IETDAI; ISSN: 0018-9383
PUBLISHER: Institute of Electrical and Electronics Engineers
DOCUMENT TYPE: Journal
LANGUAGE: English
AB We characterize and analyze the elec. performance of solution-processed,
polycryst. tetrabenzoporphyrin thin-film field-effect transistors with
staggered source and drain contacts. Devices demonstrated a saturation
field-effect mobility and threshold voltage on the order of 10^{-2} cm²/V-s
and -15 V, resp., as well as a subthreshold slope of 1.2 V/decade and an
ON-/OFF-current ratio exceeding 105. The device performance and
electronic properties of the thin film were used to construct device
energy band diagrams. Lastly, the device conduction mechanism is
discussed.
IT 52952-31-5, Tetrabenzoporphyrin
RL: DEV (Device component use); USES (Uses)
(elec. properties of staggered electrode, solution-processed, polycryst.

tetrabenzoporphyrin field-effect transistor)
RN 52952-31-5 CAPLUS
CN 29H,31H-Tetrabenzo[b,g,l,q]porphine (CA INDEX NAME)



REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

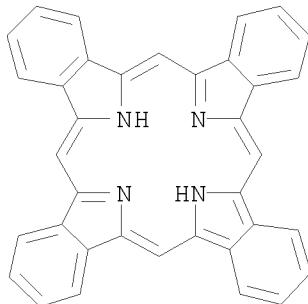
L5 ANSWER 18 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:655874 CAPLUS
DOCUMENT NUMBER: 143:316290
TITLE: Field-effect mobility of polycrystalline tetrabenzoporphyrin thin-film transistors
AUTHOR(S): Shea, Patrick B.; Kanicki, Jerzy; Ono, Noboru
CORPORATE SOURCE: Organic and Molecular Electronics Laboratory,
Department of Electrical Engineering and Computer
Science, The University of Michigan, Ann Arbor, MI,
48109, USA
SOURCE: Journal of Applied Physics (2005), 98(1),
014503/1-014503/7
CODEN: JAPIAU; ISSN: 0021-8979
PUBLISHER: American Institute of Physics
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A possible relation between a thin-film microstructure and an organic thin-film field-effect transistor (OFET) behavior is discussed in terms of nonlinearity in the extraction of the device elec. parameters. Staggered source and drain electrode OFETs were fabricated using a soluble precursor form of the organic small mol. semiconductor tetrabenzoporphyrin, and characterized using linear and nonlinear best-fit methods. Linear best-fit models overestimated the field-effect mobility and accumulation threshold voltage when compared to a nonlinear best-fit model that accounts for dispersive charge-carrier transport. The deviation between the methods is consistently less than that for polymer OFETs, as indicated by smaller nonlinearity factors of γ 1.2° and 1.7 in the linear and saturation regimes, resp. The nonlinear field-effect mobility exhibits a sublinear gate-bias dependence wherein the mobility increases at a slower rate in strong accumulation than near threshold. Also, nonlinear curve fitting indicates lower trap characteristic temps. as compared to polymer OFETs, and a relatively moderate d. of grain-boundary trap states localized at the dielec. interface and in the bulk to be filled before accumulation-related conduction dominates.
IT 52952-31-5, Tetrabenzoporphyrin
RL: PRP (Properties); TEM (Technical or engineered material use); USES

(Uses)

(field-effect mobility of polycryst. tetrabenzoporphyrin thin-film
transistors)

RN 52952-31-5 CAPLUS

CN 29H,31H-Tetrabenzo[b,g,l,q]porphine (CA INDEX NAME)



REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 19 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:302391 CAPLUS

DOCUMENT NUMBER: 142:383799

TITLE: Method for evaluation of organic semiconductor materials by measuring optical absorption and manufacture of devices using evaluated materials

INVENTOR(S): Aramaki, Shinji; Kato, Junichi

PATENT ASSIGNEE(S): Mitsubishi Chemical Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005091231	A	20050407	JP 2003-326760	20030918
JP 4100310	B2	20080611		

PRIORITY APPLN. INFO.: JP 2003-326760 20030918

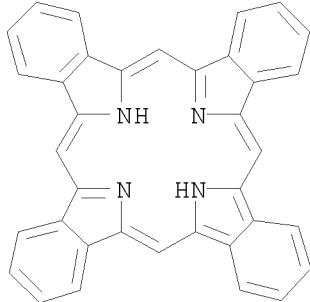
AB The method includes preparing plural samples having different carrier mobility, measuring the carrier mobility and optical absorption of the samples, establishing correlation between the measured mobility and purity calculated by the measured optical absorption, measuring optical absorption of target semiconductor materials, and evaluating carrier mobility by comparing purity calculated by the measured optical absorption with the preestablished correlation. Preferably, the organic semiconductor materials have porphyrins and are useful for transistors. Carrier mobility show good correlation with purity calculated by optical absorption.

IT 52952-31-5P, 29H,31H-Tetrabenzo[b,g,l,q]porphine

RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(evaluation of organic semiconductor materials by measuring optical absorption for manufacture of semiconductor devices)

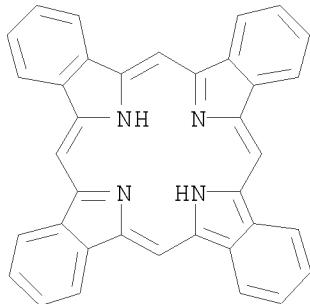
RN 52952-31-5 CAPLUS
CN 29H,31H-Tetrabenzo[b,g,l,q]porphine (CA INDEX NAME)



L5 ANSWER 20 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:238200 CAPLUS
DOCUMENT NUMBER: 142:307999
TITLE: Organic field-effect transistors
INVENTOR(S): Aramaki, Shinji; Tsurutani, Yasuyuki; Sakai, Yoshitada
PATENT ASSIGNEE(S): Mitsubishi Chemical Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005072569	A	20050317	JP 2004-224313	20040730
PRIORITY APPLN. INFO.:			JP 2003-287666	A 20030806

AB The gate insulator films of organic FETs are laminates of polymer-containing high-dielec.-constant insulator films and polymer-containing low-dielec.-constant insulator films, where the difference in the dielec. constant of the both insulator films is ≥ 1 .
IT 52952-31-5, Tetrabenzoporphyrin
RL: DEV (Device component use); USES (Uses)
(dielec. constant of gate insulator films of organic FETs)
RN 52952-31-5 CAPLUS
CN 29H,31H-Tetrabenzo[b,g,l,q]porphine (CA INDEX NAME)



L5 ANSWER 21 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2005:217013 CAPLUS
 DOCUMENT NUMBER: 142:307926
 TITLE: Design and fabrication of a field effect transistor with an organic semiconductor layer of tetrabenzo copper porphyrin
 INVENTOR(S): Miura, Daisuke; Nakayama, Tomonari; Ohnishi, Toshinobu; Kubota, Makoto
 PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Japan
 SOURCE: PCT Int. Appl., 36 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005022649	A1	20050310	WO 2004-JP12044	20040817
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2005079204	A	20050324	JP 2003-305487	20030828
US 20060145141	A1	20060706	US 2005-545398	20050812
US 7285441	B2	20071023		
US 20080048185	A1	20080228	US 2007-892326	20070822
US 7394096	B2	20080701		
PRIORITY APPLN. INFO.:			JP 2003-305487 WO 2004-JP12044 US 2005-545398	A 20030828 W 20040817 A3 20050812
OTHER SOURCE(S): MARPAT 142:307926				
AB	The present invention relates to a field effect transistor having an organic semiconductor layer using a tetrabenzo copper porphyrin crystal and to a method for manufacturing the field effect transistor.			

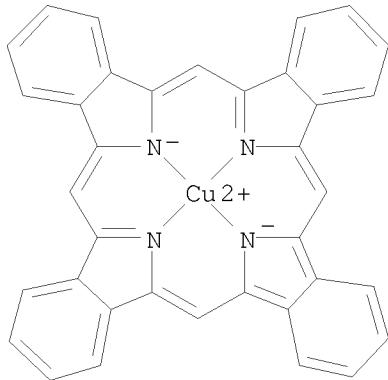
The field effect transistor has an organic semiconductor layer, which contains at least one tetrabenzo Cu porphyrin crystal and has peaks at ≥ 2 of Bragg angles (2θ) in CuK α x-ray diffraction of $8.4^\circ \pm 0.2^\circ$, $10.2^\circ \pm 0.2^\circ$, $11.8^\circ \pm 0.2^\circ$, and $16.9^\circ \pm 0.2^\circ$.

IT 21519-18-6

RL: DEV (Device component use); USES (Uses)
(design and fabrication of a field effect transistor with an organic semiconductor layer of tetrabenzo copper porphyrin)

RN 21519-18-6 CAPLUS

CN Copper, [29H,31H-tetrabenzo[b,g,l,q]porphinato(2-)-κN29,κN30,κN31,κN32]-, (SP-4-1)- (CA INDEX NAME)



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 22 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:986131 CAPLUS

DOCUMENT NUMBER: 141:430596

TITLE: Manufacture of high-purity porphyrins for field-effect transistors

INVENTOR(S): Aramaki, Shinji; Kato, Junichi

PATENT ASSIGNEE(S): Mitsubishi Chemical Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

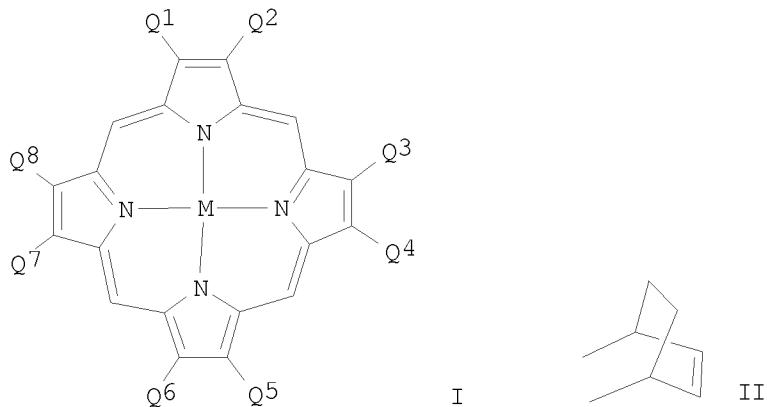
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

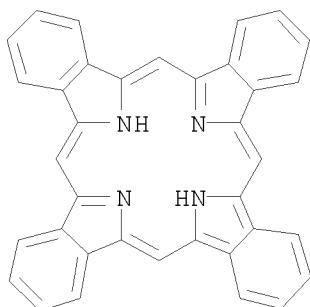
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2004323376	A	20041118	JP 2003-116711	20030422
PRIORITY APPLN. INFO.:			JP 2003-116711	20030422
OTHER SOURCE(S):	MARPAT	141:430596		
GI				



- AB The porphyrins I ($Z_1-Z_8 = \text{monovalent organic group; } \geq 1 \text{ of } Q_1Q_2, Q_3Q_4, Q_5Q_6, \text{ and } Q_7Q_8$ form II; $M = \text{two H, metal}$) are manufactured by oxidation of porphyrinogens, where the content of aldehydes other than HCHO or their precursor alc. is $\leq 20 \text{ mol}$ or $\leq 80 \text{ mol}$ to 1 mol porphyrinogens, resp. before and/or during the oxidation. Thus, Et 4,7-dihydro-4,7-ethano-2H-isoindole-1-carboxylate was reduced, treated with $p\text{-MeC}_6\text{H}_4\text{SO}_3\text{H}$, and oxidized with chloranil to give I ($Q_1Q_2, Q_3Q_4, Q_5Q_6, \text{ and } Q_7Q_8$ form II; $M = \text{two H}$), which was spin-coated between source and drain electrodes, and heated to give a field-effect transistor showing high saturation mobility.
- IT 52952-31-5P, 29H,31H-Tetrabenzo[b,g,l,q]porphine
 RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
 (manufacture of high-purity porphyrins for field-effect transistors by oxidation of porphyrinogens under control of aldehyde and alc. content)
- RN 52952-31-5 CAPLUS
- CN 29H,31H-Tetrabenzo[b,g,l,q]porphine (CA INDEX NAME)



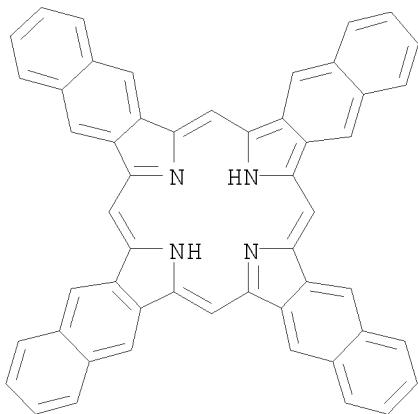
L5 ANSWER 23 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2004:857665 CAPLUS
 DOCUMENT NUMBER: 141:359266
 TITLE: Field effect transistor and method of producing the same
 INVENTOR(S): Miura, Daisuke; Nakayama, Tomonari

PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Japan
 SOURCE: PCT Int. Appl., 37 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004087836	A1	20041014	WO 2004-JP4346	20040326
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2004320007	A	20041111	JP 2004-106680	20040331
US 20060099732	A1	20060511	US 2005-535202	20050517
US 7094625	B2	20060822		
PRIORITY APPLN. INFO.:			JP 2003-96210 WO 2004-JP4346	A 20030331 W 20040326

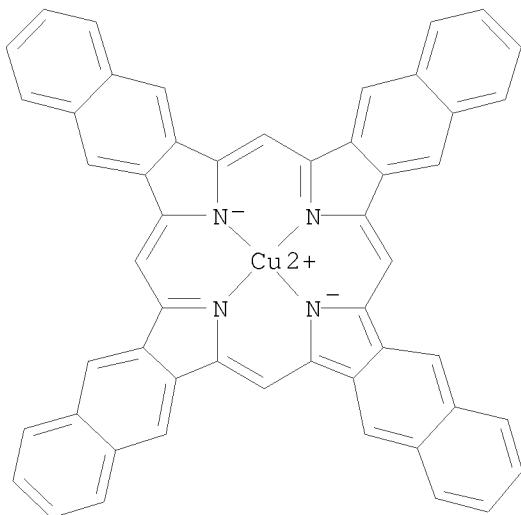
OTHER SOURCE(S): MARPAT 141:359266

- AB A field effect transistor having a high field effect mobility is provided which can be obtained by a simple method. The field effect transistor includes an organic semiconductor layer composed of a crystallized film of a naphthoporphyrin compound, which is obtained by the conversion by heating of the coating film of a porphyrin compound, the organic semiconductor layer having crystal grains with a maximum diameter of 1 mm or more.
- IT 73523-25-8P 776295-35-3P
 RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (films, active layer; method of producing field effect transistor including crystallized naphthoporphyrin compound, obtained by conversion of coating film of porphyrin compound)
- RN 73523-25-8 CAPPLUS
- CN 37H,39H-Tetranaphtho[2,3-b:2',3'-g:2'',3''-l:2''',3'''-q]porphine (CA INDEX NAME)



RN 776295-35-3 CAPLUS

CN Copper, [37H,39H-tetranaphtho[2,3-b:2',3'-g:2'',3''-l:2''',3'''-q]porphinato(2-)-κN37,κN38,κN39,κN40]-, (SP-4-1)-(9CI) (CA INDEX NAME)



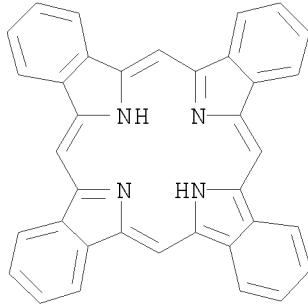
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 24 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:652219 CAPLUS
DOCUMENT NUMBER: 141:183119
TITLE: Field-effect transistors
INVENTOR(S): Aramaki, Shinji
PATENT ASSIGNEE(S): Mitsubishi Chemical Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004228371	A	20040812	JP 2003-15057	20030123
PRIORITY APPLN. INFO.:				
AB FETs contain organic semiconductor films which have different d. distribution of oxidation- or reduction-type elec. conductivity yielders in regions constituting source and/or drain electrodes. The FETs have smooth carrier flow from the source and/or drain electrodes into semiconductor layers.				
IT 52952-31-5, Tetrabenzoporphyrin	RL: DEV (Device component use); USES (Uses)	(FETs containing organic semiconductor films)		
RN 52952-31-5 CAPLUS	CN 29H,31H-Tetrabenzo[b,g,l,q]porphine (CA INDEX NAME)			



L5 ANSWER 25 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:236771 CAPLUS

DOCUMENT NUMBER: 140:432116

TITLE: Solution-processible organic semiconductor for transistor applications: Tetrabenzoporphyrin

AUTHOR(S): Aramaki, Shinji; Sakai, Yoshimasa; Ono, Noboru

CORPORATE SOURCE: Mitsubishi Chemical Group Science and Technology Research Center, Inc., Aoba-ku, Yokohama, 227-8502, Japan

SOURCE: Applied Physics Letters (2004), 84(12), 2085-2087

CODEN: APPLAB; ISSN: 0003-6951

PUBLISHER: American Institute of Physics

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The authors report an organic semiconductor, tetrabenzoporphyrin, that can be used for transistor applications. It can be derived from a soluble precursor compound with bicyclo structure. The precursor film is amorphous and shows good film morphol. Then it is converted into an insol. crystalline semiconductor film quant. at elevated temperature of 150-200°. Field-effect transistors were fabricated by this method. Observed mobility of the devices exceeded 10-2 cm²/V s with appropriate process and device structure.

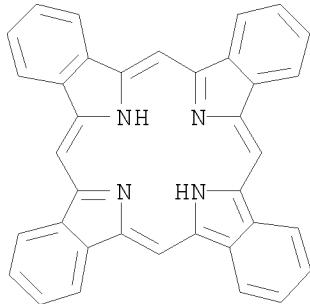
IT 52952-31-5P, Tetrabenzoporphyrin

RL: PNU (Preparation, unclassified); PRP (Properties); TEM (Technical or

engineered material use); PREP (Preparation); USES (Uses)
(tetrabenzoporphyrin as solution-processible organic semiconductor for
transistor applications)

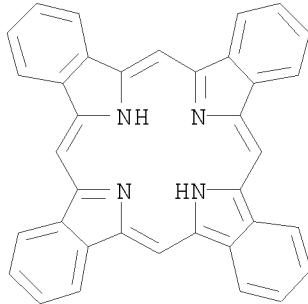
RN 52952-31-5 CAPLUS

CN 29H,31H-Tetrabenzo[b,g,l,q]porphine (CA INDEX NAME)



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 26 OF 26 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:766184 CAPLUS
DOCUMENT NUMBER: 140:68049
TITLE: 29H,31H-Tetrabenzo[b,g,l,q]porphin
AUTHOR(S): Aramaki, Shinji; Mizuguchi, Jin
CORPORATE SOURCE: Mitsubishi Chemical Corporation, Science and Technology Research Center Inc., Aoba-ku, Yokohama, 227-8502, Japan
SOURCE: Acta Crystallographica, Section E: Structure Reports Online (2003), E59(10), o1556-o1558
CODEN: ACSEBH; ISSN: 1600-5368
URL: <http://journals.iucr.org/e/issues/2003/10/00/ob6299/index.html>
PUBLISHER: International Union of Crystallography
DOCUMENT TYPE: Journal; (online computer file)
LANGUAGE: English
AB The title compound, C₃₆H₂₂N₄, has recently been found to exhibit an excellent field effect transistor characteristic. The mol. is not entirely flat in its crystal structure (i.e. not D₂h) but is slightly deformed, as characterized by crystallog. Ci symmetry. The mols. are stacked along the b axis in a herring-bone fashion. Crystallog. data are given.
IT 52952-31-5, 29H,31H-Tetrabenzo[b,g,l,q]porphine
RL: PRP (Properties)
(crystal structure of)
RN 52952-31-5 CAPLUS
CN 29H,31H-Tetrabenzo[b,g,l,q]porphine (CA INDEX NAME)



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L2 50 L1
L3 1509 L1 FULL

FILE 'CPLUS' ENTERED AT 10:37:53 ON 19 DEC 2008
L4 948 L3
L5 26 L4 AND TRANSISTOR

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SESSION
CA SUBSCRIBER PRICE ENTRY -20.80 SESSION -20.80

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DICTIONARY FILE UPDATES: 17 DEC 2008 HIGHEST RN 1086212-50-1

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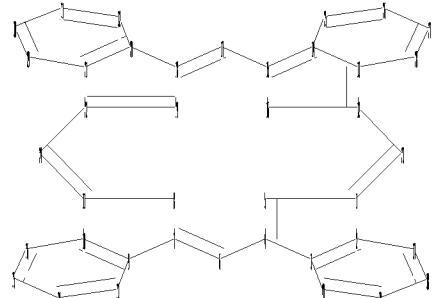
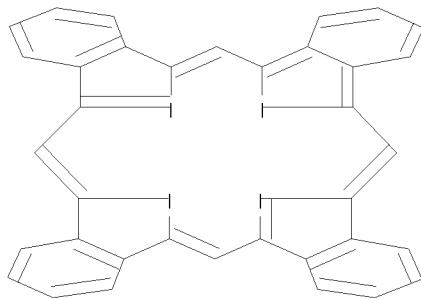
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10-11 10-36 11-24 12-13 12-16 12-23 13-14 13-28 14-15 14-25 15-16 15-17
17-18 18-19 18-20 19-22 20-21 20-32 21-22 21-29 22-24 25-26 26-27 27-28
29-30 30-31 31-32 33-34 34-35 35-36 37-38 38-39 39-40
exact/norm bonds :
7-8 8-11 12-16 15-16
normalized bonds :
1-2 1-5 1-23 2-3 2-37 3-4 3-40 4-5 4-6 6-7 7-9 9-10 9-33 10-11 10-36
11-24 12-13 12-23 13-14 13-28 14-15 14-25 15-17 17-18 18-19 18-20 19-22
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1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
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20:Atom 21:Atom 22:Atom 23:Atom 24:Atom 25:Atom 26:Atom 27:Atom 28:Atom
29:Atom 30:Atom 31:Atom 32:Atom 33:Atom 34:Atom 35:Atom 36:Atom 37:Atom
38:Atom 39:Atom 40:Atom
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BATCH **COMPLETE**
PROJECTED ITERATIONS: 14285 TO 17675
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FILE COVERS 1907 - 19 Dec 2008 VOL 149 ISS 26
FILE LAST UPDATED: 18 Dec 2008 (20081218/ED)

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L9 103 L8

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L9 ANSWER 1 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2008:1056455 CAPLUS
DOCUMENT NUMBER: 149:434800
TITLE: Complicated Fermi-type vibronic resonance: Untangling of the single-site quasi-line fluorescence excitation spectra of a methylated dibenzoporphin
AUTHOR(S): Arabei, S. M.; Kuzmitsky, V. A.; Solovyov, K. N.
CORPORATE SOURCE: Stepanov Institute of Physics, NAS of Belarus B.I., Minsk, 220072, Belarus
SOURCE: Chemical Physics (2008), 352(1-3), 197-204
CODEN: CMPHC2; ISSN: 0301-0104
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The quasi-line low-temperature (4.2 K) fluorescence excitation spectra of 2,3,12,13-tetramethyldibenzo[g,q]porphin introduced into an n-octane matrix were measured in the range of the S2 → S0 electronic transition at selective fluorescence monitoring for the 2 main types of impurity centers (sites). A characteristic feature of these spectra is that a conglomerate of quasi-lines - a structured complex band - is observed

instead of one 0-0 quasi-line of the S₂ ← S₀ transition. In this band, the intensity distributions for the 2 main sites considerably differ from each other. The occurrence of such conglomerates is interpreted as a result of nonadiabatic vibrational-electronic interaction between the vibronic S₂ and S₁ states (the complex vibronic analog of the Fermi resonance). The frequencies and intensities of individual transitions determined from the deconvolution of complex conglomerates are used as the initial data for solving the inverse spectroscopic problem: the determination of

the unperturbed electronic and vibrational levels of states involved in the resonance and the vibronic-interaction matrix elements between them. This problem is solved with a method developed previously. The exptl. results and their anal. are compared to the analogous data obtained earlier for meso-tetraazaporphin and meso-tetrapropylporphyrin. The energy intervals between the S₂ and S₁ electronic levels (ΔE_{S2S1}) of the 2 main types of impurity centers formed by mols. of a given porphyrin in the crystal matrix significantly differ from each other, the values of this difference ($\delta \Delta E_{S2S1}$) being considerably greater for tetramethyldibenzoporphyrin, $\delta \Delta E_{S2S1} = 228 \text{ cm}^{-1}$, than for the 2 other porphyrins. At the same time, the energies of the unperturbed vibrational states of the S₁ electronic level participating in the resonance are very close to each other for these 2 sites.

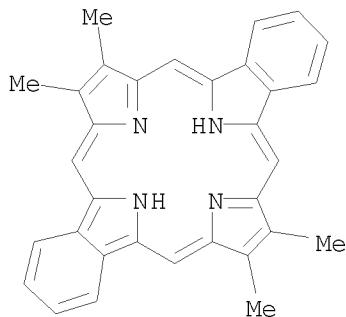
IT 157869-32-4

RL: PRP (Properties)

(untangling of single-site quasi-line fluorescence excitation spectra of methylated dibenzoporphyrin with complicated Fermi-type vibronic resonance)

RN 157869-32-4 CAPLUS

CN 25H,27H-Dibenzo[b,l]porphine, 8,9,20,21-tetramethyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2008:856762 CAPLUS

DOCUMENT NUMBER: 149:189210

TITLE: Novel organic precursor compound and method of producing organic semiconductor device

INVENTOR(S): Masumoto, Akane; Kikuchi, Toshihiro; Ono, Noboru; Uno, Hidemitsu; Nakashima, Hiroko

PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Japan; Ehime University

SOURCE: U.S. Pat. Appl. Publ., 58pp.

CODEN: USXXCO

DOCUMENT TYPE:

Patent

LANGUAGE:

English

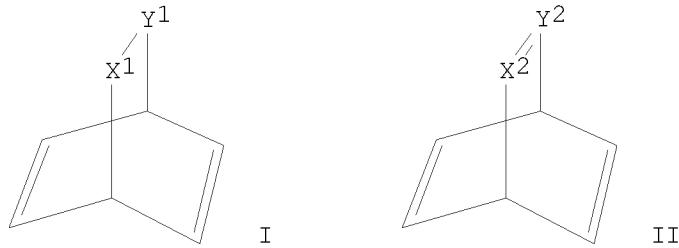
FAMILY ACC. NUM. COUNT:

1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20080171403	A1	20080717	US 2007-964619	20071226
PRIORITY APPLN. INFO.:			JP 2006-352555	A 20061227
			JP 2007-232091	A 20070906

OTHER SOURCE(S): MARPAT 149:189210
GI



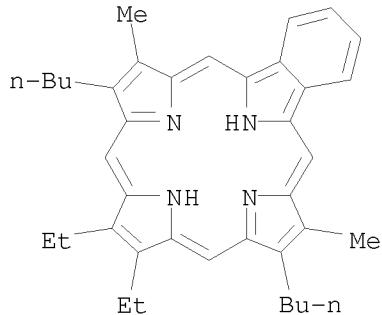
AB A method of producing an organic semiconductor device is provided in which a layer composed of an organic semiconductor having excellent crystallinity and orientation in a low-temperature region can be formed, and the device can be produced in the air. The method includes forming a layer composed of an organic semiconductor precursor on a base body and irradiating the organic semiconductor precursor with light, wherein the organic semiconductor precursor is a porphyrin compound or an azaporphyrin compound having in its mol. at least one of the structure represented by the following general formula (I) where X1 and Y1 each independently represent O, S, carbonyl, thiocarbonyl, CR₁R₂ or NR₃, and R₁-R₃ are each H, linear or branched C₁-C₁₂ alkyl, alkenyl, alkoxy, alkylthio, alkyl ester, or aryl groups, or hydroxyl but X1 and Y1 are not CR₁R₂ at the same time. Alternatively, the structure has formula (II) where X₂=Y₂ is N-N or CR₄=N and R₄ is H, a C₁-C₁₂ linear or branched alkyl, alkenyl, alkoxy, alkylthio, alkyl ester, or aryl group, or hydroxyl. The precursor porphyrin or azaporphyrin may contain a coupled ring structure formed by this structure. In addition to the organic semiconductor layer, a crystallization promoting layer, preferably

a polysiloxane compound, may be provided. The precursor compds. and method are particularly suited for fabrication of thin film transistors.

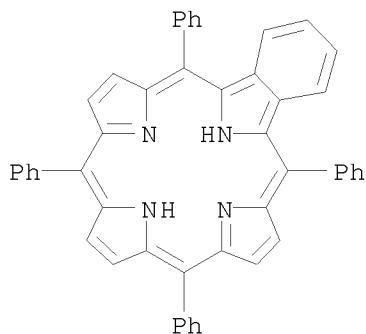
IT 1039105-62-8P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(target precursor; organic precursor compound and method of producing organic semiconductor device)

RN 1039105-62-8 CAPLUS

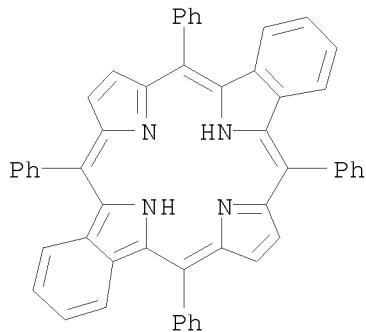
CN 23H,25H-Benzo[b]porphine, 9,18-dibutyl-13,14-diethyl-8,19-dimethyl- (CA INDEX NAME)



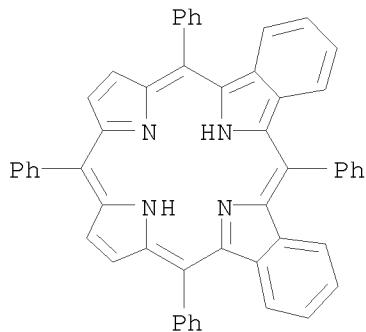
L9 ANSWER 3 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2008:492936 CAPLUS
 DOCUMENT NUMBER: 149:93859
 TITLE: Chemical transformations of mono- and bis(buta-1,3-dien-1-yl)porphyrins: a new synthetic approach to mono- and dibenzoporphyrins
 AUTHOR(S): Silva, Ana M. G.; de Oliveira, Kleber T.; Faustino, Maria A. F.; Neves, Maria G. P. M. S.; Tome, Augusto C.; Silva, Artur M. S.; Cavaleiro, Jose A. S.; Brandao, Paula; Felix, Vitor
 CORPORATE SOURCE: Department of Chemistry, University of Aveiro, Aveiro, 3810-193, Port.
 SOURCE: European Journal of Organic Chemistry (2008), (4), 704-712
 CODEN: EJOCFK; ISSN: 1434-193X
 PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 149:93859
 AB β -Butadienyl- and β,β' -dibutadienylporphyrins were prepared by the Wittig reaction of β -formyl- and β,β' -diformyl-meso-tetraphenylporphyrins with allylic P ylide. Subsequent treatment of β -butadienylporphyrin with dienophiles afforded the corresponding Diels-Alder adducts. In the absence of dienophiles, β -butadienylporphyrin underwent electrocyclization, followed by oxidation, to give monobenzoporphyrin in good yield. Similarly, adjacent and opposite dibenzoporphyrins were successfully synthesized from adjacent and opposite β,β' -dibutadienylporphyrins, resp. This is the 1st report of electrocyclization of β -butadienylporphyrins. The structures of mono- and dibenzoporphyrin Ni complexes, and of a Diels-Alder adduct, were determined by single-crystal x-ray diffraction; a strong distortion from the planarity of the porphyrin core was observed
 IT 915093-05-9 915093-06-0 1033305-44-0
 RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative) (formation and UV-visible spectrum of)
 RN 915093-05-9 CAPLUS
 CN 23H,25H-Benzo[b]porphine, 6,11,16,21-tetraphenyl- (9CI) (CA INDEX NAME)



RN 915093-06-0 CAPLUS
CN 25H,27H-Dibenzo[b,l]porphine, 6,11,18,23-tetraphenyl- (9CI) (CA INDEX NAME)

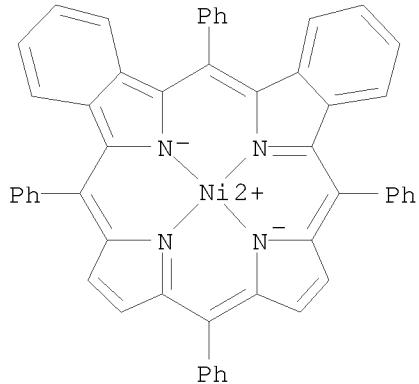


RN 1033305-44-0 CAPLUS
CN 25H,27H-Dibenzo[b,g]porphine, 6,11,16,23-tetraphenyl- (CA INDEX NAME)



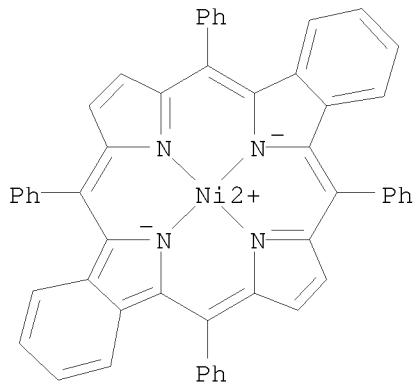
IT 1033305-29-1P 1033305-31-5P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation, crystal structure and demetalation of)
RN 1033305-29-1 CAPLUS

CN Nickel, [6,11,16,23-tetraphenyl-25H,27H-dibenzo[b,g]porphinato(2-)-κN25,κN26,κN27,κN28]-, (SP-4-2)- (CA INDEX NAME)



RN 1033305-31-5 CAPLUS

CN Nickel, [6,11,18,23-tetraphenyl-25H,27H-dibenzo[b,l]porphinato(2-)-κN25,κN26,κN27,κN28]-, (SP-4-1)- (CA INDEX NAME)



IT 1033305-27-9P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation, crystal structure, demetalation and reaction with dienophiles)

RN 1033305-27-9 CAPLUS

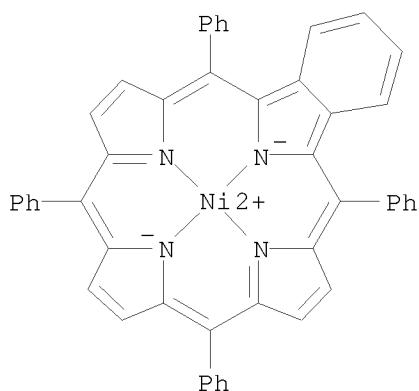
CN Nickel, [6,11,16,21-tetraphenyl-23H,25H-benzo[b]porphinato(2-)-κN23,κN24,κN25,κN26]-, (SP-4-2)-, compd. with trichloromethane (1:1) (CA INDEX NAME)

CM 1

CRN 1033305-26-8

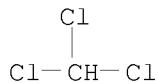
CMF C48 H30 N4 Ni

CCI CCS



CM 2

CRN 67-66-3
CMF C H Cl3



REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 4 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2008:490559 CAPLUS
DOCUMENT NUMBER: 149:53762
TITLE: Thermal behavior of free-base and core-modified bicyclo[2.2.2]octadiene-fused porphyrins
AUTHOR(S): Uno, Hidemitsu; Shimizu, Yusuke; Uoyama, Hiroki; Tanaka, Yousuke; Okujima, Tetsuo; Ono, Noboru
CORPORATE SOURCE: Division of Synthesis and Analysis, Department of Molecular Science, Integrated Center for Sciences (INCS), Ehime University and CREST, Japan Science and Technology Agency (JST), Matsuyama, 790-8577, Japan
SOURCE: European Journal of Organic Chemistry (2008), (1), 87-98
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Multistep thermal fragmentation of quadruply bicyclo[2.2.2]-octadiene-fused porphyrins was examined in detail. After the first extrusion of an ethylene mol. from the porphyrin derivative, the opposite bicyclo-[2.2.2]octadiene moiety preferentially underwent the second retro-Diels-Alder reaction to give an opp-dibenzoporphyrin derivative rather than an adj-dibenzoporphyrin derivative. These two benzoporphyrin derivs. then decomposed to give a tribenzoporphyrin derivative in similar rates. The temperature regions of these fragmentations could

not be distinguished by thermogravimetric anal. In contrast, the third and the fourth fragmentations obviously occurred stepwise. There was a temperature region where the tribenzoporphyrin derivative preferentially existed.

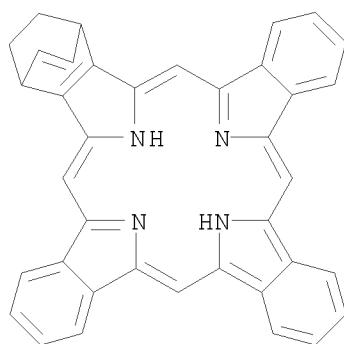
In the case of the 21,23-dithiaporphyrin derivative, opp-21,23-dithiadibenzoporphyrin, possessing benzo moieties fused at the pyrrole parts of the core-modified porphyrin chromophore was predominantly formed during the fragmentation. In the case of the 21-thiaphorphyrin derivative, an ethylene mol. was extruded selectively from the bicyclo[2.2.2]octadiene moiety adjacent to the thiophene part to give 21-thiabenzo[q]porphyrin and then 21-thiabenzo[g,q]porphyrin derivs. In these cases, the last ethylene extrusion also occurred very slowly.

IT 1032406-95-3P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (crystal structure; thermal fragmentation/retro-Diels-Alder reaction of free-base and core-modified bicyclo[2.2.2]octadiene-fused porphyrins)

RN 1032406-95-3 CAPLUS

CN 1,4-Ethano-29H,31H-tetrabenzo[b,g,l,q]porphine, 1,4-dihydro- (CA INDEX NAME)



REFERENCE COUNT:

57

THERE ARE 57 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 5 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2007:1075858 CAPLUS

DOCUMENT NUMBER: 147:552996

TITLE: Novel preparation of fluorinated isoindoles and their conversion to fluorinated benzoporphyrins

AUTHOR(S): Uno, Hidemitsu; Masuda, Go; Tukiji, Marie; Nishioka, Yuiko; Iida, Toshiya

CORPORATE SOURCE: Division of Synthesis and Analysis, Department of Molecular Science, Integrated Center for Sciences, Japan Science Technology Agency (JST), Ehime University and CREST, Matsuyama, 790-8577, Japan

SOURCE: Tetrahedron Letters (2007), 48(42), 7512-7515

CODEN: TELEAY; ISSN: 0040-4039

PUBLISHER: Elsevier Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 147:552996

AB 4,5,6,7-Tetrafluoroisoindole and their related compds. were prepared directly from the corresponding phthalonitriles by reduction with a hydride

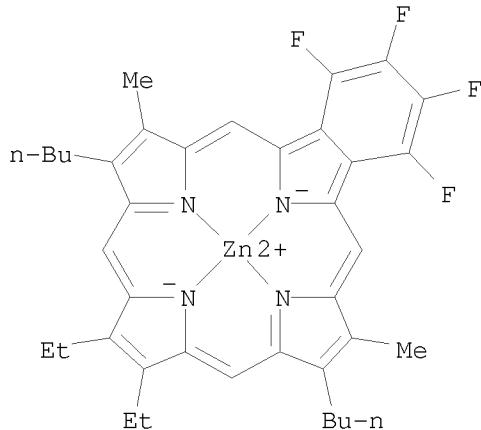
reagent such as DIBAL or catalytic hydrogenation in the presence of an acid. 4,5,6,7-Tetrafluoroisoindole was converted to fluorinated benzoporphyrins and zincated derivative

IT 957468-01-8P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of fluorinated benzoporphyrin from tetrafluoroisoindole)

RN 957468-01-8 CAPLUS

CN Zinc, [9,18-dibutyl-13,14-diethyl-1,2,3,4-tetrafluoro-8,19-dimethyl-
23H,25H-benzo[b]porphinato(2-)-
κN23,κN24,κN25,κN26]-, (SP-4-1)- (CA INDEX NAME)



REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 6 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2007:909991 CAPLUS

DOCUMENT NUMBER: 149:448084

TITLE: Synthesis and spectral properties of unsymmetrical benzoporphyrins containing phenoxy groups or quinoxaline fragments

AUTHOR(S): Galanin, N. E.; Shaposhnikov, G. P.

CORPORATE SOURCE: Ivanovo State University of Chemical Technology,
Ivanovo, 153000, Russia

SOURCE: Russian Journal of Organic Chemistry (2007), 43(7),
1080-1086

CODEN: RJOCEQ; ISSN: 1070-4280

PUBLISHER: Pleiades Publishing, Ltd.

DOCUMENT TYPE: Journal

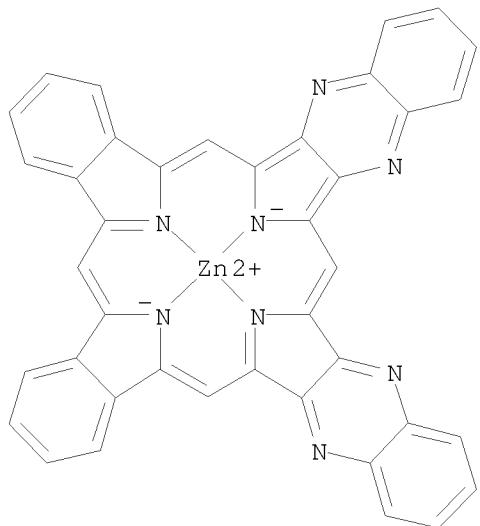
LANGUAGE: English

AB Condensation of phthalimide and 4-tert-butylphthalimide with zinc(II) acetate gave 3-(3-oxo-2,3-dihydro-1H-isoindol-1-ylidenemethyl)-1H-isoindol-1-one and 5-tert-butyl-3-(5-tert-butyl-3-oxo-2,3-dihydro-1H-isoindol-1-ylidenemethyl)-1H-isoindol-1-one, resp. Their reactions with 4-phenoxyphthalimide and quinoxaline-2,3-dicarboximide in the presence of Zn(OAc)₂ gave zinc complexes of cis-4,4'-dipheoxytetraporphyrin and cis-di(4-tert-butylbenzo)diquinoxalinoporphyrin. The complexes were converted into the free bases by treatment with sulfuric acid. Spectral properties of the obtained porphyrin derivs. were studied.

IT 1070317-63-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and demetalation of unsym. zinc benzoporphyrins)
RN 1070317-63-3 CAPLUS
CN INDEX NAME NOT YET ASSIGNED

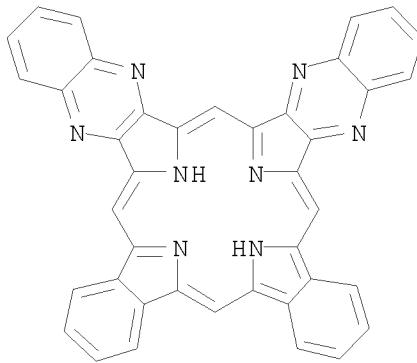
PAGE 1-A



PAGE 2-A

2 (D1-Bu-t)

IT 1070317-66-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of unsym. benzoporphyrins)
RN 1070317-66-6 CAPLUS
CN INDEX NAME NOT YET ASSIGNED



2 (D1-Bu-t)

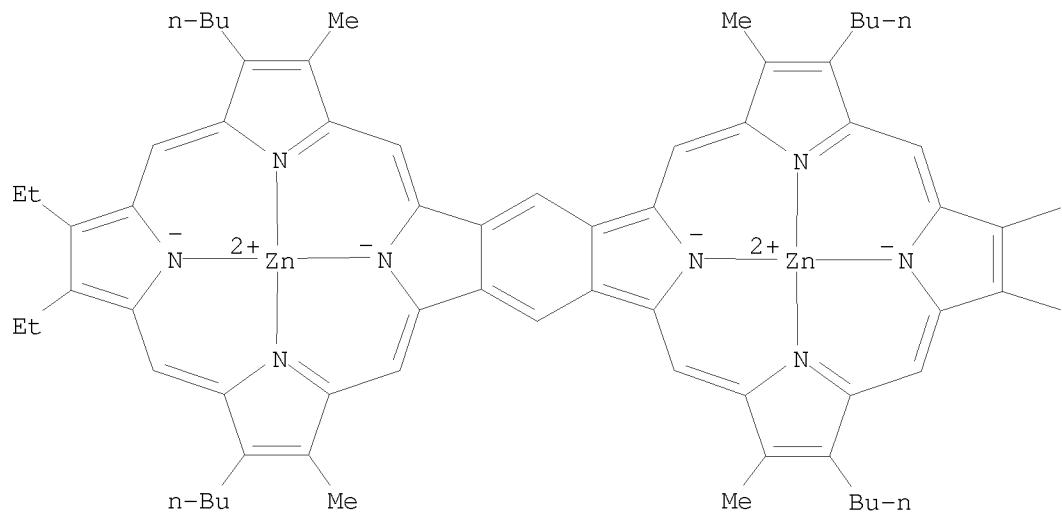
REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 7 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2007:802775 CAPLUS
 DOCUMENT NUMBER: 147:355485
 TITLE: Synthesis of porphyrin dimers fused with a benzene unit
 AUTHOR(S): Uno, Hidemitsu; Nakamoto, Ken-ichi; Kuroki, Kenji;
 Fujimoto, Akiko; Ono, Noboru
 CORPORATE SOURCE: Division of Synthesis and Analysis, Department of
 Molecular Science Integrated Center for Sciences
 (INCS), Ehime University, Matsuyama, 790-8577, Japan
 SOURCE: Chemistry--A European Journal (2007), 13(20),
 5773-5784
 CODEN: CEUJED; ISSN: 0947-6539
 PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 147:355485
 AB Bicyclo[2.2.2]octadiene-connected pyrrolo-porphyrins were prepared by an inverse-type [3 + 1] porphyrin synthesis of a bicyclo[2.2.2]octadiene-fused dipyrrole with a tripyrrane dicarbaldehyde. Another [3 + 1] porphyrin synthesis of pyrrole-connected porphyrins with the same or other tripyrrane dicarbaldehydes gave bicyclo[2.2.2]octadiene-bridged diporphyrins, the central metals and/or peripheral substituents of which were different. Thermal decomposition of the bicyclo[2.2.2]octadiene skeleton to a benzene moiety gave π -system-fused porphyrin dimers in a highly pure form.
 IT 949012-73-1P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (preparation and crystal structure of)
 RN 949012-73-1 CAPLUS
 CN Zinc, [μ -[5,14,24,33-tetrabutyl-9,10,28,29-tetraethyl-4,15,23,34-tetramethyl-39H,41H,43H,45H-benzo[1,2-b:4,5-b']diporphinato(4-)- κ N39, κ N40, κ N41, κ N42: κ N43, κ N44, κ N45, κ N46]]di-, compd. with pyridine (1:4) (CA INDEX NAME)

CM 1

CRN 406483-35-0
CMF C70 H78 N8 Zn2
CCI CCS

PAGE 1-A



PAGE 1-B

Et

Et

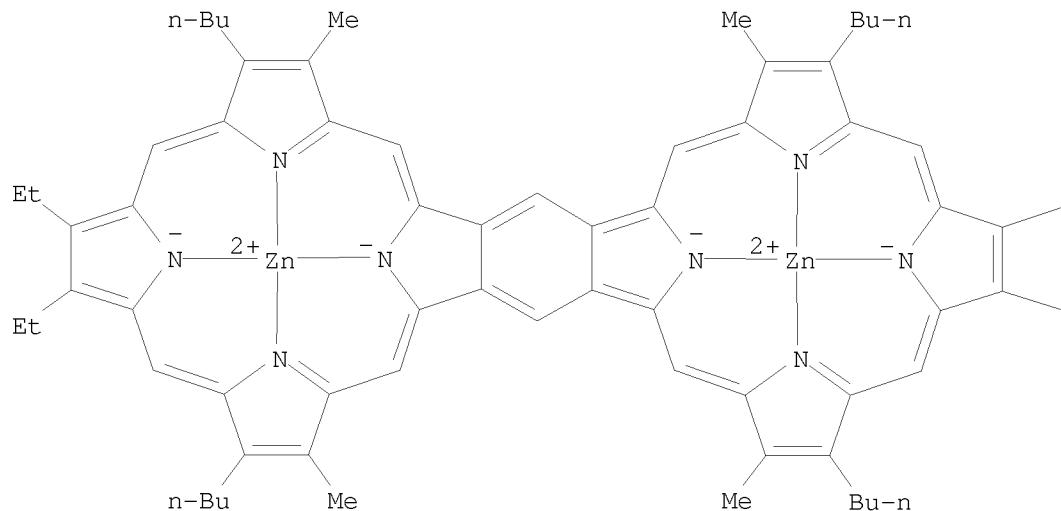
CM 2

CRN 110-86-1
CMF C5 H5 N



IT 406483-35-0P 949012-59-3P 949012-61-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation of)
RN 406483-35-0 CAPLUS
CN Zinc, [μ -[5,14,24,33-tetrabutyl-9,10,28,29-tetraethyl-4,15,23,34-tetramethyl-39H,41H,43H,45H-benzo[1,2-b:4,5-b']diporphinato(4-)- κ N39, κ N40, κ N41, κ N42: κ N43, κ N44, κ N45, κ N46]]di- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

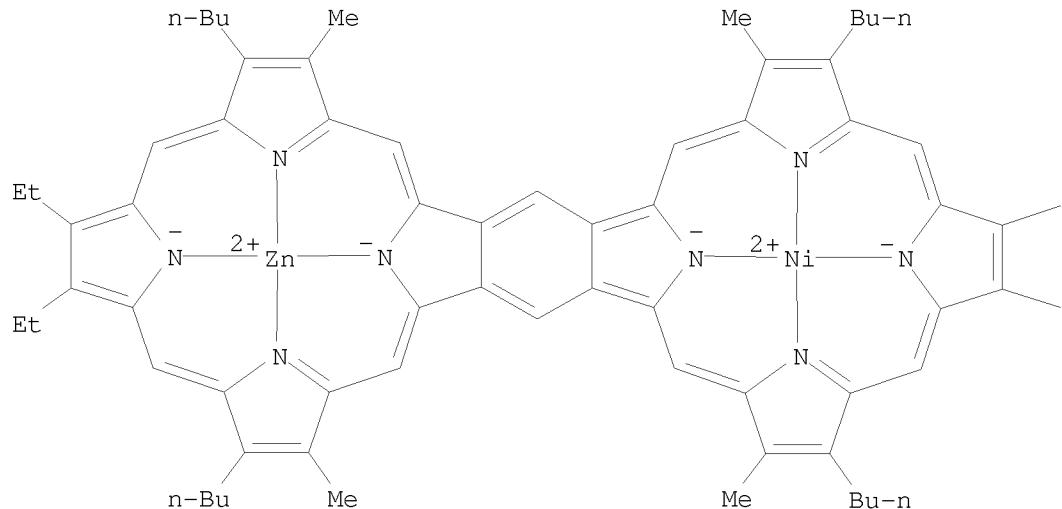


RN 949012-59-3 CAPLUS

10583126.trn

CN Nickel, [μ-[5,14,24,33-tetrabutyl-9,10,28,29-tetraethyl-4,15,23,34-tetramethyl-39H,41H,43H,45H-benzo[1,2-b:4,5-b']diporphinato(4-)κN39,κN40,κN41,κN42:κN43,κN44,κN45,κN46]] (zinc) - (CA INDEX NAME)

PAGE 1-A

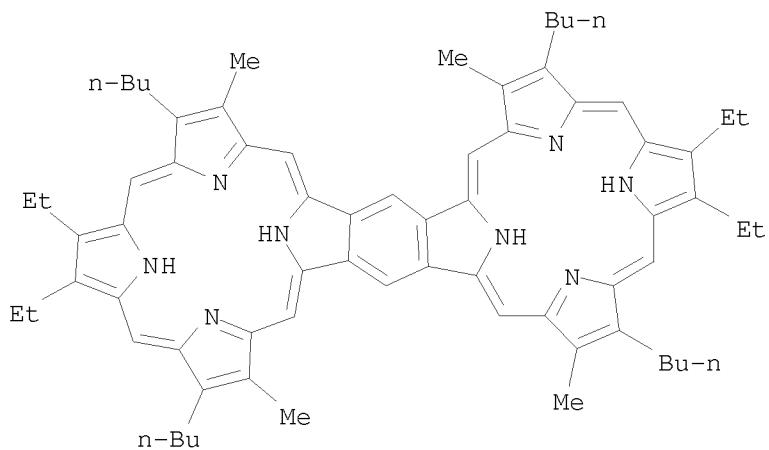


PAGE 1-B

—Et

—Et

RN 949012-61-7 CAPLUS
CN 39H, 41H, 43H, 45H-Benzo[1,2-b:4,5-b']diporphine,
5,14,24,33-tetrabutyl-9,10,28,29-tetraethyl-4,15,23,34-tetramethyl- (CA INDEX NAME)

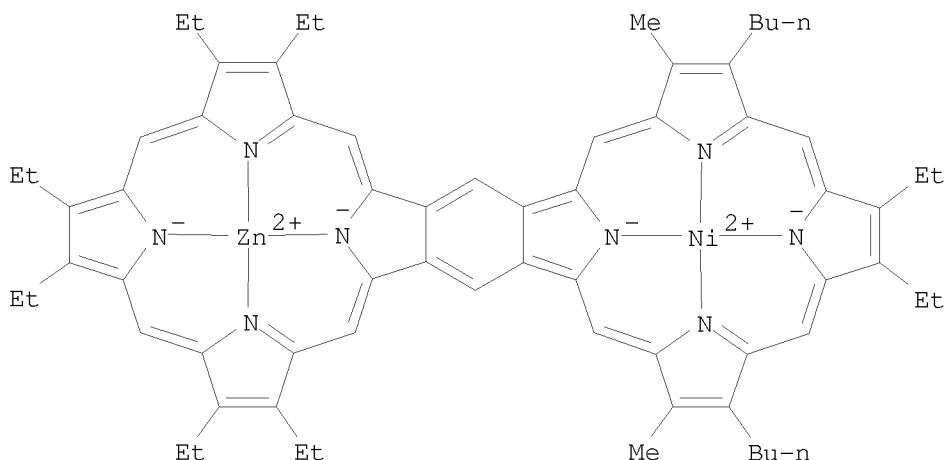


IT 949012-69-5P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 949012-69-5 CAPLUS

CN Nickel, [μ -[5,14-dibutyl-9,10,23,24,28,29,33,34-octaethyl-4,15-dimethyl-39H,41H,43H,45H-benzo[1,2-b:4,5-b']diporphinato(4-) - κ N39, κ N40, κ N41, κ N42: κ N43, κ N44, κ N45, κ N46]](zinc)- (CA INDEX NAME)



REFERENCE COUNT:

45

THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 8 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2007:436957 CAPLUS

DOCUMENT NUMBER: 147:300608

TITLE: Electronic structures and spectra of porphyrin with fused benzoheterocycles: DFT and TDDFT-PCM investigations

AUTHOR(S): Zhu, Yulan; Zhou, Shuyu; Kan, Yuhe; Su, Zhongmin

CORPORATE SOURCE: Department of Chemistry, Jiangsu Province Key
Laboratory for Chemistry of Low-dimensional Materials,
Huaiyin Teachers College, Huaiyin, Jiangsu, 223300,
Peop. Rep. China

SOURCE: International Journal of Quantum Chemistry (2007),
107(7), 1614-1623

CODEN: IJQCB2; ISSN: 0020-7608

PUBLISHER: John Wiley & Sons, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB D. functional theory (DFT) and time-dependent DFT (TDDFT) are applied to study seven asym. π -conjugated porphyrins with extended benzoheterocycles: quinoline, indole, benzoimidazole, benzothiazole, benzoxazole, 2,1,3-benzothiadiazole, and 2,1,3-benzoxadiazole. The solvation effects on the excitation energies for these porphyrin derivs. in chloroform are taken into account by using the continuum model (C-PCM) combined with TDDFT, and this method makes a closer agreement with the exptl. values, especially for the B-bands of these objects. Great efforts have been made on investigating the influences of the fused aromatic units of the porphyrins on the absorption properties as these can be particularly important for many applications. Benzoheterocycle introduction and solvent effects have been systematically investigated, and close agreement is obtained between calculated and measured UV-vis spectra. These theor. data could shed light on future synthetic chemical

IT 312273-73-7 947151-93-1 947151-94-2

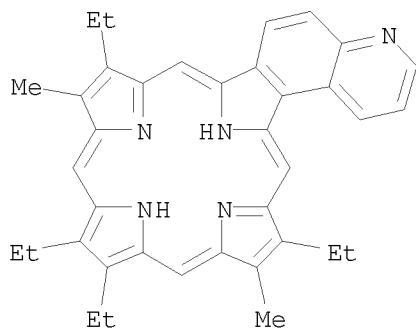
947151-95-3 947151-96-4

RL: PRP (Properties)

(DFT study on electronic structures and spectra of porphyrin with fused benzoheterocycles)

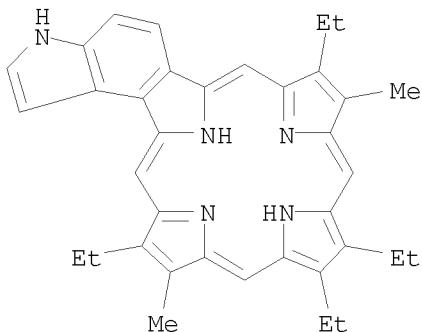
RN 312273-73-7 CAPLUS

CN 25H,27H-Quino[5,6-b]porphine, 10,15,16,21-tetraethyl-11,20-dimethyl- (CA INDEX NAME)

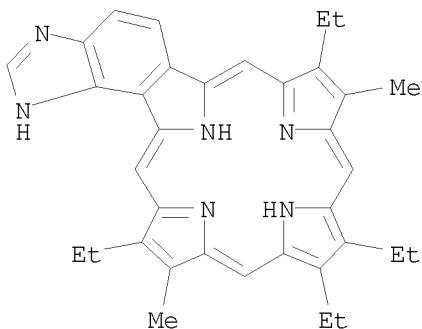


RN 947151-93-1 CAPLUS

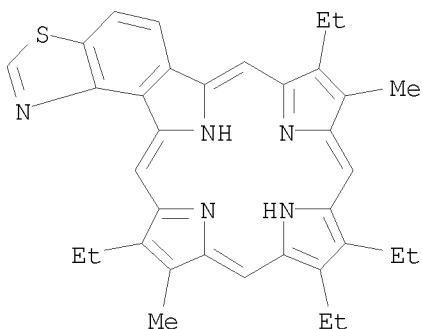
CN 3H,24H,26H-Indolo[4,5-b]porphine, 9,14,15,20-tetraethyl-10,19-dimethyl- (CA INDEX NAME)



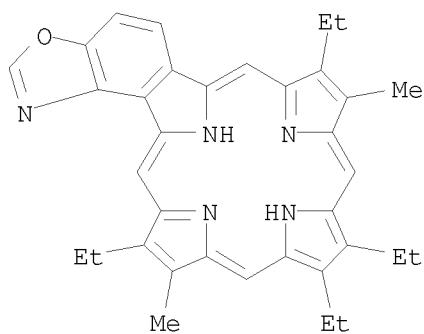
RN 947151-94-2 CAPLUS
CN 1H, 24H, 26H-Benzimidazo[4,5-b]porphine,
9,14,15,20-tetraethyl-10,19-dimethyl- (CA INDEX NAME)



RN 947151-95-3 CAPLUS
CN 24H, 26H-Benzothiazolo[4,5-b]porphine,
9,14,15,20-tetraethyl-10,19-dimethyl- (CA INDEX NAME)



RN 947151-96-4 CAPLUS
CN 24H, 26H-Benzoxazolo[4,5-b]porphine, 9,14,15,20-tetraethyl-10,19-dimethyl-
(CA INDEX NAME)



REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 9 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:1252123 CAPLUS

DOCUMENT NUMBER: 146:154706

TITLE: C-F Bond Activation by Modified Sulfonatodehalogenation: Facile Synthesis and Properties of Novel Tetrafluorobenzoporphyrins by Direct Intramolecular Cyclization and Reductive Defluorinative Aromatization of Readily Available β -Perfluoroalkylated Porphyrins

AUTHOR(S): Liu, Chao; Shen, Dong-Mei; Zeng, Zhuo; Guo, Can-Cheng; Chen, Qing-Yun

CORPORATE SOURCE: Key Laboratory of Organofluorine Chemistry, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai, 200032, Peop. Rep. China

SOURCE: Journal of Organic Chemistry (2006), 71(26), 9772-9783
CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 146:154706

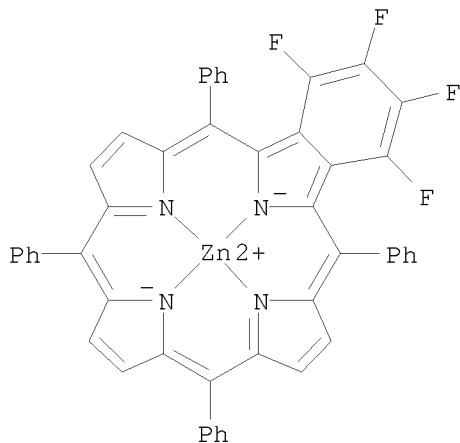
AB A facile and efficient synthesis of various novel fluorinated extended porphyrins was developed. The method is based on the direct intramolecular cyclization and reductive defluorinative aromatization of readily available β -perfluoroalkylated porphyrins by highly selective C-F bond activation under modified sulfonatodehalogenation reaction conditions. Various β -(ω -chloroperfluoroalkyl)-meso-tetraphenylporphyrins prepared readily by sulfonatodehalogenation reaction or palladium-catalyzed cross-coupling reaction were treated with Na₂S₂O₄/K₂CO₃ (10:10 equiv per RF tail) in DMSO at 100° for 10-30 min, resulting in good yields of novel β -tetrafluorobenzo-meso-tetraphenylporphyrins. That further reduction of C-F bonds of the products was not observed under the optimal conditions indicates the high selectivity of the reaction. The amount of sodium dithionite, base, and central metal ion of substrate porphyrins play important roles in the reaction. Detailed mechanism investigations and systematic studies on x-ray crystallog. structure and photophys. and electrochem. properties of new tetrafluorobenzoporphyrins are also reported.

IT 848394-49-0P

RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(crystal structure and electrochem. properties of zinc tetrafluorobenzoporphyrin prepared by intramol. cyclization and reductive defluorinative aromatization of perfluoroalkylated porphyrin)

RN 848394-49-0 CAPLUS

CN Zinc, [1,2,3,4-tetrafluoro-6,11,16,21-tetraphenyl-23H,25H-benzo[b]porphinato(2-)–κN23,κN24,κN25,κN26]–, (SP-4-1)– (CA INDEX NAME)



IT 919528-38-4P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(crystal structure of zinc tetrafluorobenzoporphyrin prepared by intramol. cyclization and reductive defluorinative aromatization of perfluoroalkylated porphyrin)

RN 919528-38-4 CAPLUS

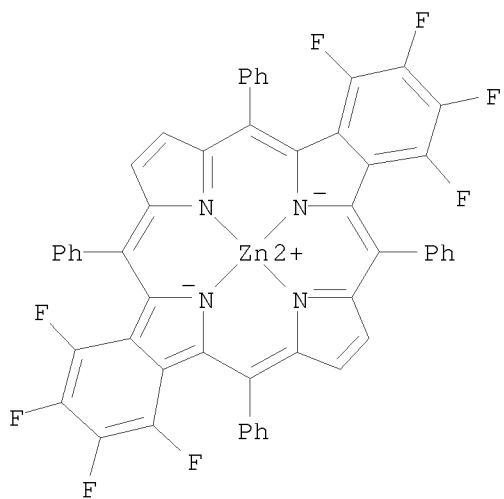
CN Zinc, [1,2,3,4,13,14,15,16-octafluoro-6,11,18,23-tetraphenyl-25H,27H-dibenzo[b,l]porphinato(2-)–κN25,κN26,κN27,κN28]–, (SP-4-1)–, compd. with tetrahydrofuran, hydrate (1:4:1) (CA INDEX NAME)

CM 1

CRN 919528-20-4

CMF C52 H24 F8 N4 Zn

CCI CCS



CM 2

CRN 109-99-9
CMF C₄ H₈ O

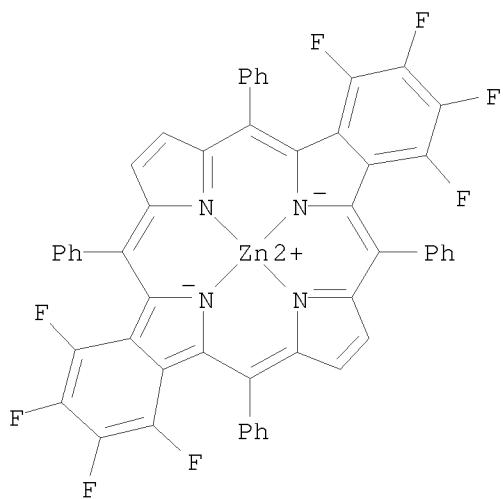


IT 919528-20-4P

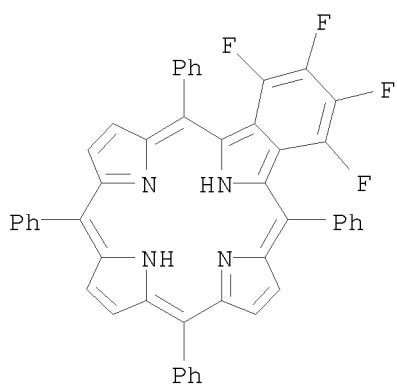
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(electrochem. properties of zinc tetrafluorobenzoporphyrin prepared by intramol. cyclization and reductive defluorinative aromatization of perfluoroalkylated porphyrin)

RN 919528-20-4 CAPLUS

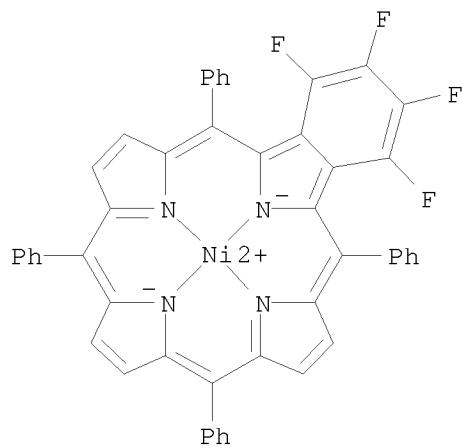
CN Zinc, [1,2,3,4,13,14,15,16-octafluoro-6,11,18,23-tetraphenyl-25H,27H-dibenzo[b,l]porphinato(2-)-κN₂₅,κN₂₆,κN₂₇,κN₂₈]-,
(SP-4-1)- (CA INDEX NAME)



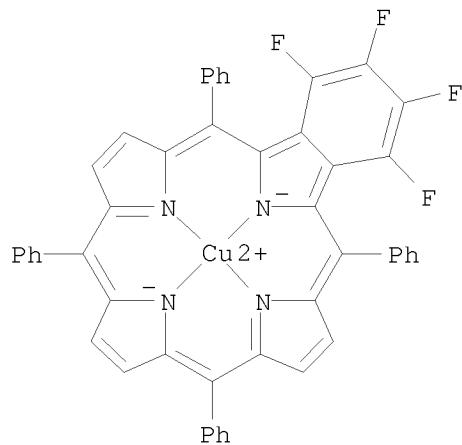
IT 848394-52-5P 919528-14-6P 919528-16-8P
919528-19-1P 919528-22-6P 919528-24-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of tetrafluorobenzoporphyrins by intramol. cyclization and
reductive defluorinative aromatization of perfluoroalkylated
porphyrins)
RN 848394-52-5 CAPLUS
CN 23H,25H-Benzo[b]porphine, 1,2,3,4-tetrafluoro-6,11,16,21-tetr phenyl- (CA
INDEX NAME)



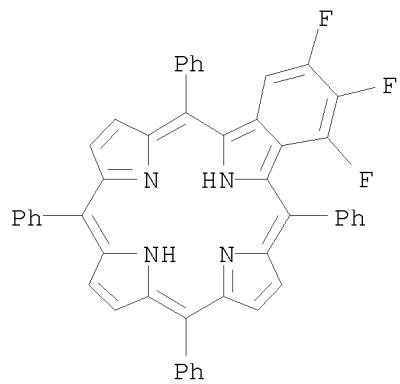
RN 919528-14-6 CAPLUS
CN Nickel, [1,2,3,4-tetrafluoro-6,11,16,21-tetr phenyl-23H,25H-
benzo[b]porphinato(2-)-κN23,κN24,κN25,κN26]-,
(SP-4-1)- (CA INDEX NAME)



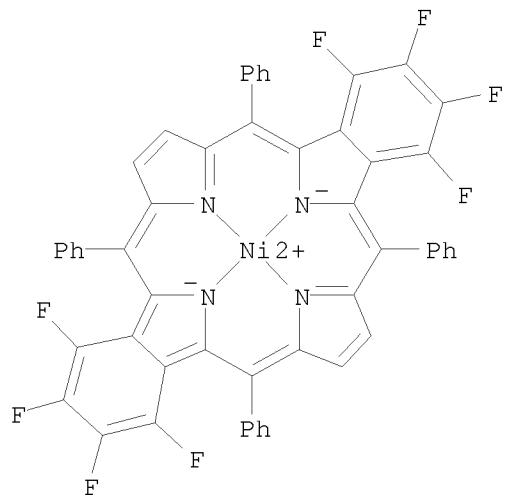
RN 919528-16-8 CAPLUS
CN Copper, [1,2,3,4-tetrafluoro-6,11,16,21-tetr phenyl-23H,25H-
benzo[b]porphinato(2-)– $\kappa\text{N}_{23},\kappa\text{N}_{24},\kappa\text{N}_{25},\kappa\text{N}_{26}$]–,
(SP-4-1)– (CA INDEX NAME)



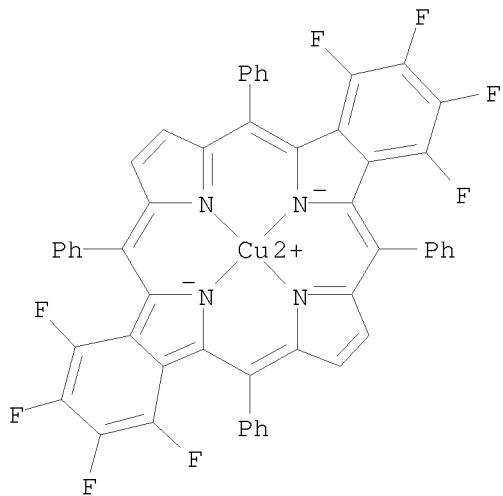
RN 919528-19-1 CAPLUS
CN 23H,25H-Benzo[b]porphine, 1,2,3-trifluoro-6,11,16,21-tetr phenyl– (CA
INDEX NAME)



RN 919528-22-6 CAPLUS
CN Nickel, [1,2,3,4,13,14,15,16-octafluoro-6,11,18,23-tetraphenyl-25H,27H-dibenzo[b,l]porphinato(2-)-κN25,κN26,κN27,κN28]-,
(SP-4-1)- (CA INDEX NAME)

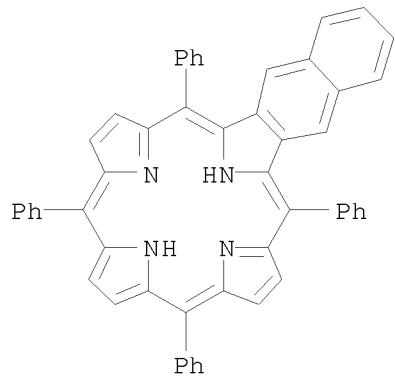


RN 919528-24-8 CAPLUS
CN Copper, [1,2,3,4,13,14,15,16-octafluoro-6,11,18,23-tetraphenyl-25H,27H-dibenzo[b,l]porphinato(2-)-κN25,κN26,κN27,κN28]-,
(SP-4-1)- (CA INDEX NAME)

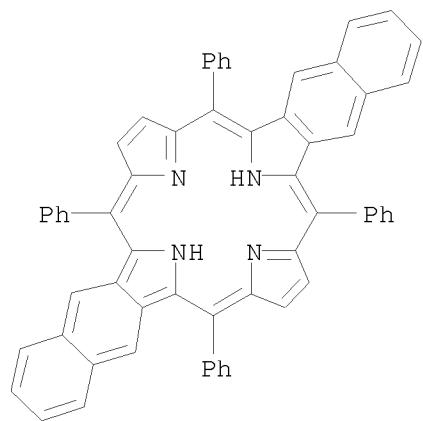


REFERENCE COUNT: 95 THERE ARE 95 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

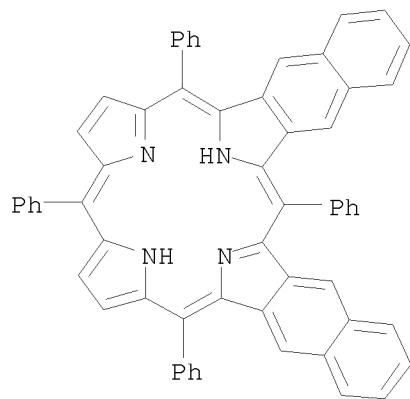
L9 ANSWER 10 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2006:1110757 CAPLUS
 DOCUMENT NUMBER: 146:81693
 TITLE: The first example of Diels-Alder cycloaddition of ortho-xylylenes to meso-tetraarylporphyrins containing electron-deficient β,β -double bonds
 AUTHOR(S): Ostrowski, Stanislaw; Wyrebek, Przemyslaw
 CORPORATE SOURCE: Institute of Chemistry, University of Podlasie, Siedlce, 08-110, Pol.
 SOURCE: Tetrahedron Letters (2006), 47(47), 8437-8440
 CODEN: TELEAY; ISSN: 0040-4039
 PUBLISHER: Elsevier Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 146:81693
 AB β -Nitro-5,10,15,20-tetraphenylporphyrin and its zinc complex, or 2,7-dinitro-5,10,15,20-tetraphenylporphyrin, react with 1,3-dihydrobenzo[c]thiophene 2,2-dioxide in refluxing 1,2,4-trichlorobenzene, giving rise to chlorins, bacteriochlorins or isobacteriochlorins. The products obtained are attractive intermediates for further functionalization of porphyrins and may be of potential use as sensitizers in photodynamic therapy.
 IT 193283-52-2P 916993-50-5P 916993-51-6P
 916993-54-9P 916993-55-0P 917392-92-8P
 917392-95-1P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (Diels-Alder cycloaddn. of ortho-xylylene to meso-tetraphenylporphyrins)
 RN 193283-52-2 CAPLUS
 CN 25H,27H-Naphtho[2,3-b]porphine, 7,12,17,22-tetraphenyl- (CA INDEX NAME)



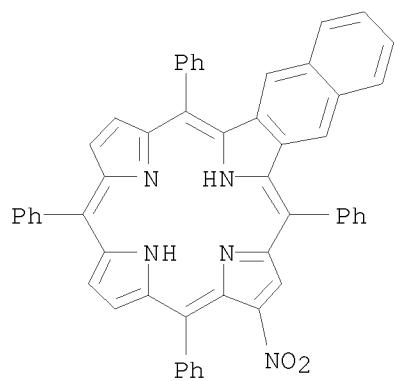
RN 916993-50-5 CAPLUS
CN 29H,31H-Dinaphtho[2,3-b:2',3'-l]porphine, 7,12,21,26-tetraphenyl- (CA INDEX NAME)



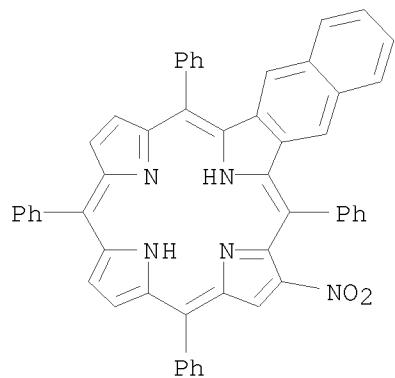
RN 916993-51-6 CAPLUS
CN 29H,31H-Dinaphtho[2,3-b:2',3'-g]porphine, 7,12,17,26-tetraphenyl- (CA INDEX NAME)



RN 916993-54-9 CAPLUS
CN 25H,27H-Naphtho[2,3-b]porphine, 10-nitro-7,12,17,22-tetraphenyl- (CA INDEX NAME)

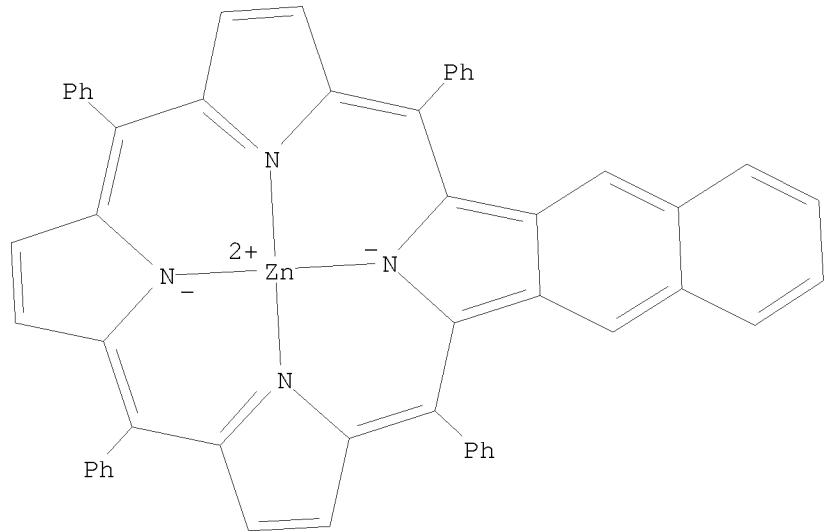


RN 916993-55-0 CAPLUS
CN 25H,27H-Naphtho[2,3-b]porphine, 9-nitro-7,12,17,22-tetraphenyl- (CA INDEX NAME)



RN 917392-92-8 CAPLUS

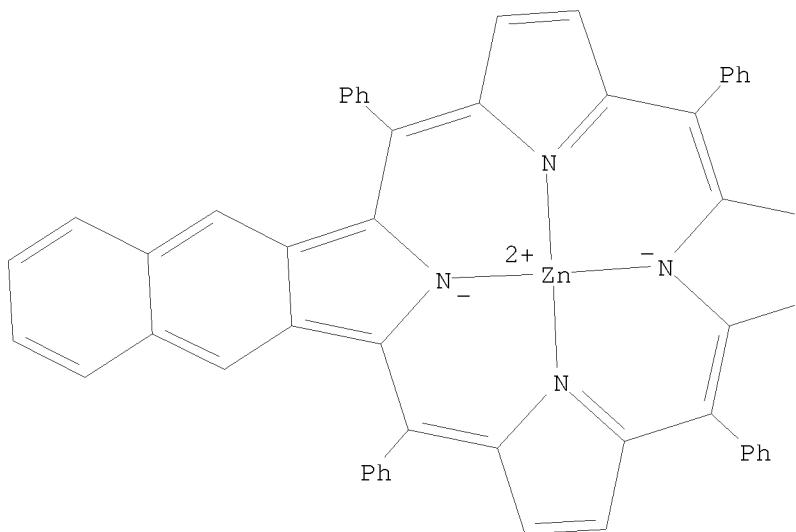
CN Zinc, [7,12,17,22-tetraphenyl-25H,27H-naphtho[2,3-b]porphinato(2-)-κN25,κN26,κN27,κN28]-, (SP-4-1)- (CA INDEX NAME)

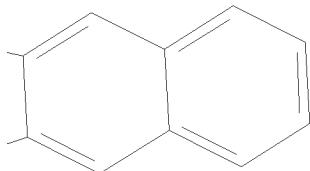


RN 917392-95-1 CAPLUS

CN Zinc, [7,12,21,26-tetraphenyl-29H,31H-dinaphtho[2,3-b:2',3'-1]porphinato(2-)-κN29,κN30,κN31,κN32]-, (SP-4-1)- (CA INDEX NAME)

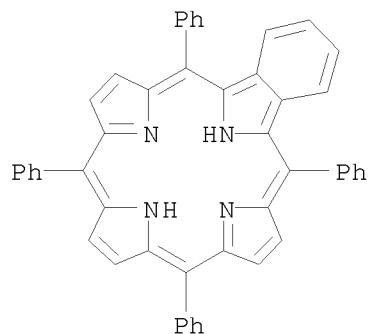
PAGE 1-A



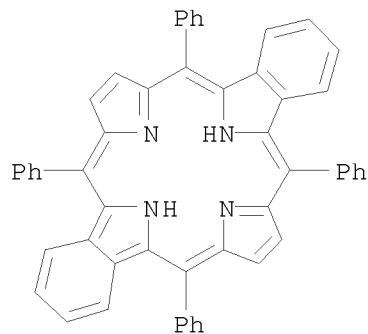


REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

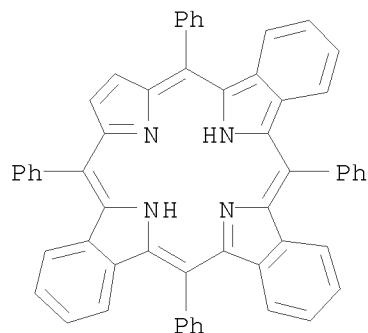
L9 ANSWER 11 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2006:979857 CAPLUS
DOCUMENT NUMBER: 145:505241
TITLE: Benzoporphyrins via an olefin ring-closure metathesis methodology
AUTHOR(S): Jiao, Lijuan; Hao, Erhong; Fronczek, Frank R.; Vicente, M. Graca H.; Smith, Kevin M.
CORPORATE SOURCE: Department of Chemistry, Louisiana State University, Baton Rouge, LA, 70803, USA
SOURCE: Chemical Communications (Cambridge, United Kingdom) (2006), (37), 3900-3902
CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 145:505241
AB A new route to benzoporphyrins is reported in which readily available vicinal dibromoporphyrins are bis-allylated using the Suzuki reaction, cyclized by way of olefin metathesis and finally oxidized to give mono-, di-, or tri-benzoporphyrins.
IT 915093-05-9P 915093-06-0P 915093-07-1P
915093-10-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of benzoporphyrins via Suzuki reaction and ring-closing metathesis)
RN 915093-05-9 CAPLUS
CN 23H,25H-Benz[b]porphine, 6,11,16,21-tetraphenyl- (9CI) (CA INDEX NAME)



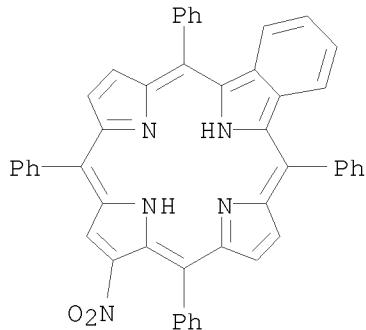
RN 915093-06-0 CAPLUS
CN 25H,27H-Dibenzo[b,l]porphine, 6,11,18,23-tetraphenyl- (9CI) (CA INDEX NAME)



RN 915093-07-1 CAPLUS
CN 27H,29H-Tribenzo[b,g,l]porphine, 6,13,20,25-tetraphenyl- (9CI) (CA INDEX NAME)



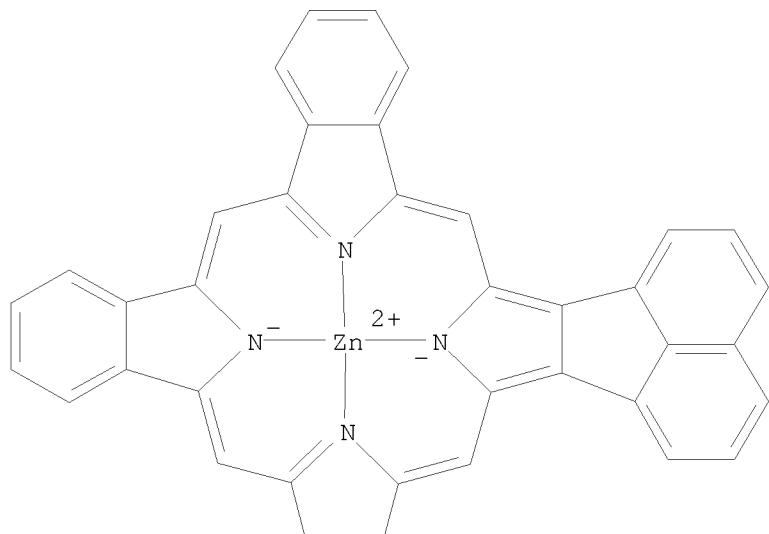
RN 915093-10-6 CAPLUS
CN 23H,25H-Benzo[b]porphine, 2-nitro-5,10,15,20-tetraphenyl- (9CI) (CA INDEX NAME)



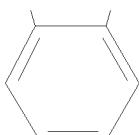
REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 12 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2006:93393 CAPLUS
 DOCUMENT NUMBER: 144:323611
 TITLE: A new synthesis of acenaphthobenzoporphyrin and fluoranthobenzoporphyrin
 AUTHOR(S): Okujima, Tetsuo; Komobuchi, Naoki; Uno, Hidemitsu; Ono, Noboru
 CORPORATE SOURCE: Department of Chemistry, Faculty of Science, Ehime University, Matsuyama, 790-8577, Japan
 SOURCE: Heterocycles (2006), 67(1), 255-267
 CODEN: HTCYAM; ISSN: 0385-5414
 PUBLISHER: Japan Institute of Heterocyclic Chemistry
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 144:323611
 AB Zinc benzoporphyrins fused with one acenaphthylene or fluoranthene, (3) and (4) resp., were prepared by the condensation of a bicyclo[2.2.2]octadiene (BCOD)-fused tripyrrane with appropriate pyrrole dialdehydes and the subsequent retro Diels-Alder reaction. The absorptions of these new porphyrins were very intense at both Soret and Q bands, which might be useful as organic dyes for solar cells.
 IT 879896-29-4P 880171-42-6P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (new preparation of zinc complexes of benzoporphyrins fused with acenaphthylene or fluoranthene, and absorption spectra as potential dyes for solar cells)
 RN 879896-29-4 CAPLUS
 CN Zinc, [31H,33H-acenaphtho[1,2-b]tribenzo[g,l,q]porphinato(2-)-
 κN31,κN32,κN33,κN34]-, (SP-4-1)- (9CI) (CA INDEX
 NAME)

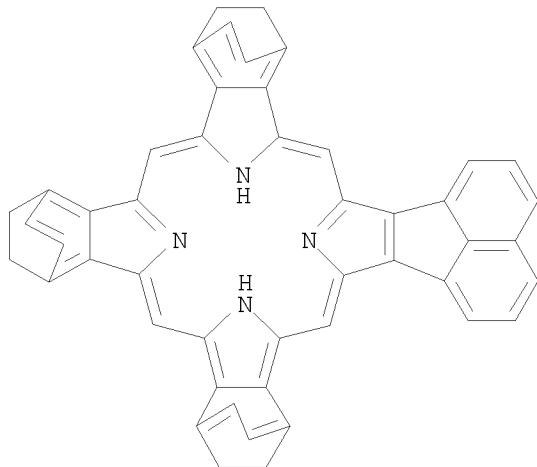
PAGE 1-A



PAGE 2-A



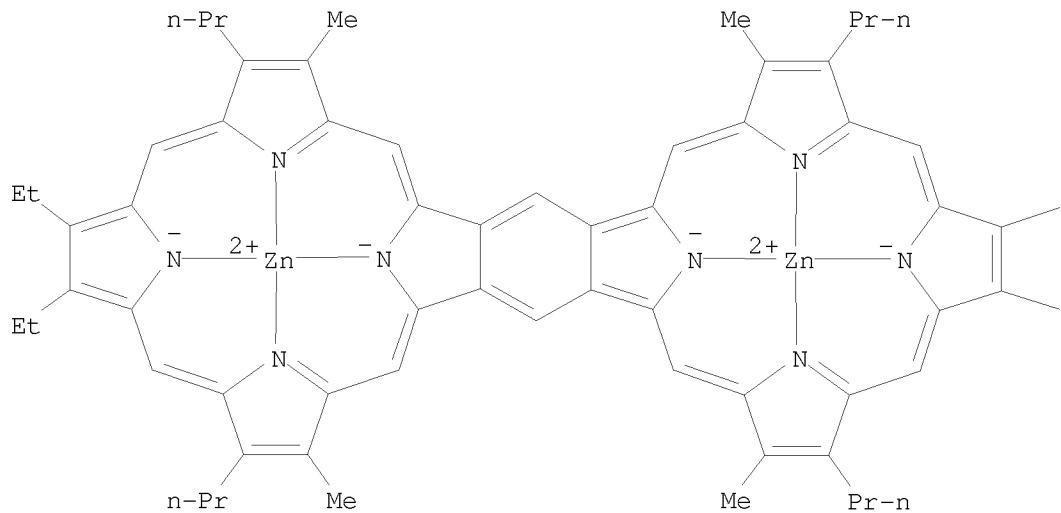
RN 880171-42-6 CAPLUS
CN 1,4:8,11:15,18-Triethano-31H,33H-acenaphtho[1,2-b]tribenzo[g,l,q]porphine
(9CI) (CA INDEX NAME)



REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 13 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2006:91919 CAPLUS
DOCUMENT NUMBER: 145:387119
TITLE: High performance porphyrin semiconductor for transistor applications
AUTHOR(S): Aramaki, Shinji; Yoshiyama, Ruichi; Sakai, Masayoshi; Ono, Noboru
CORPORATE SOURCE: Mitsubishi Chemical Group Science & Technology Research Center, Inc., 1000 Kamoshida-cho, Aoba-ku, Yokohama, 227-8502, Japan
SOURCE: Digest of Technical Papers - Society for Information Display International Symposium (2005), 36(Bk. 1), 296-299
CODEN: DTPSDS
PUBLISHER: Society for Information Display
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Various porphyrin compds. were investigated for solution-processible semiconductors for transistor applications. Some show excellent semiconductor properties. Their films can be formed by solution-process, i.e., by thermal conversion of their precursor film coated from their solution. Some porphyrin compds. show good semiconductor performance in terms of mobility and long-term driving stability.
IT 910923-74-9
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process); USES (Uses)
(high performance porphyrin semiconductor for transistor applications)
RN 910923-74-9 CAPLUS
CN Zinc, [μ -[9,10,28,29-tetraethyl-4,15,23,34-tetramethyl-5,14,24,33-tetrapropyl-39H,41H,43H,45H-benzo[1,2-b:4,5-b']diporphinato(4-)- κ N39, κ N40, κ N41, κ N42: κ N43, κ N44, κ N45, κ N46]]di- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

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REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 14 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2005:1198904 CAPLUS
 DOCUMENT NUMBER: 144:88067
 TITLE: Porphyrins with exocyclic rings. Part 19: Efficient syntheses of phenanthrolinoporphyrins
 Lash, Timothy D.; Lin, Yanning; Novak, Bennett H.; Parikh, Mihir D.
 AUTHOR(S):
 CORPORATE SOURCE: Department of Chemistry, Illinois State University, Normal, IL, 61790-4160, USA
 SOURCE: Tetrahedron (2005), 61(49), 11601-11614
 CODEN: TETRAB; ISSN: 0040-4020
 PUBLISHER: Elsevier B.V.
 DOCUMENT TYPE: Journal
 LANGUAGE: English

OTHER SOURCE(S): CASREACT 144:88067
GI

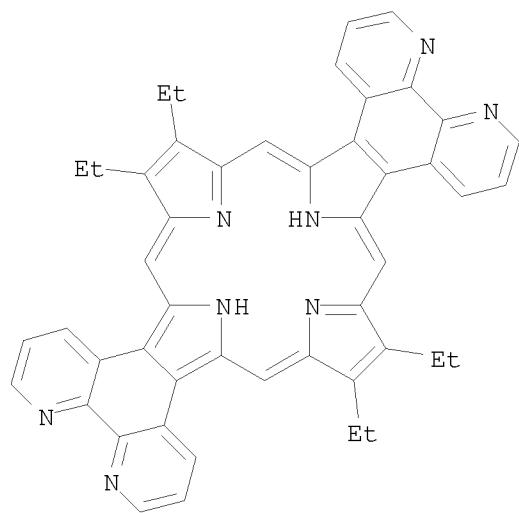
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB 5-Nitro-1,10-phenanthrolines react with isocyanoacetate esters in the presence of DBU in THF to give excellent yields of the corresponding phenanthrolinopyrroles, e.g. I. These were condensed with acetoxyethylpyrroles using catalytic quantities of p-toluenesulfonic acid in acetic acid to give dipyrrylmethanes, e.g. II, but these structures proved to be poorly suited for porphyrin synthesis due to the electron-withdrawing nature of the fused phenanthroline unit. However, phenanthrolinopyrrole Et esters could be converted to the corresponding α -unsubstituted pyrroles with KOH in ethylene glycol at 180-190 °C, and these condensed with 2 equiv of acetoxyethylpyrroles in refluxing acetic acid-iso-Pr alc. to give tripyrranes, e.g. III. In a one pot procedure, tripyrane di-tert-Bu esters were treated with TFA at room temperature to cleave the protective groups, diluted with dichloromethane, reacted with pyrrole dialdehydes and oxidized to afford phenanthrolinoporphyins, e.g. IV, in 52-83% yield. These conditions also allow the synthesis of porphyrins with addnl. fused acenaphthylene or phenanthrene rings. Although the UV-vis spectra for these porphyrins are unexceptional, the presence of an external coordination site allows many potential applications to be considered. Porphyrins with two phenanthroline units could not be prepared by the '3+1' strategy. Instead, α -unsubstituted phenanthrolinopyrroles were reacted with a bis(dimethylaminomethyl)pyrrole in refluxing acetic acid to give moderate yields of the corresponding opp-diphenanthrolinoporphyins. In one case, a triphenanthrolinoporphyin and trace amts. of an adj-diphenanthrolinoporphyin were formed as byproducts.

IT 872452-65-8P 872452-66-9P 872452-75-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(efficient syntheses of phenanthrolinoporphyins)

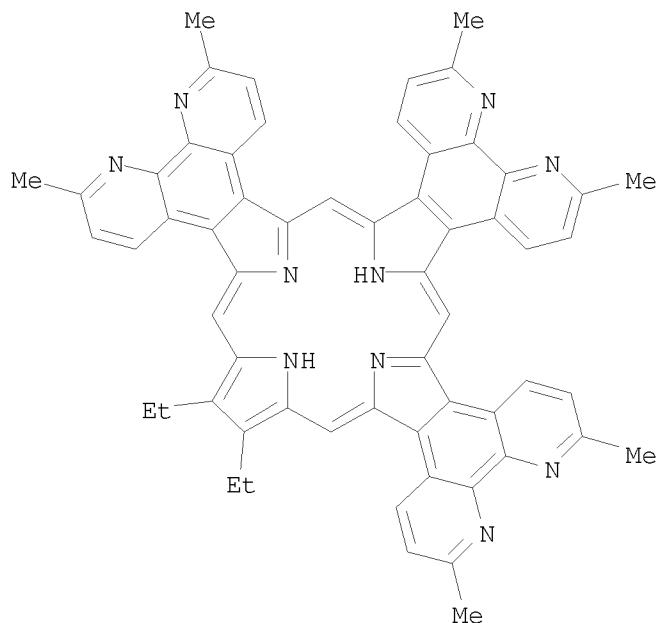
RN 872452-65-8 CAPLUS

CN 33H,35H-Di[1,10]phenanthrolino[5,6-b:5',6'-l]porphine,
12,13,28,29-tetraethyl- (9CI) (CA INDEX NAME)



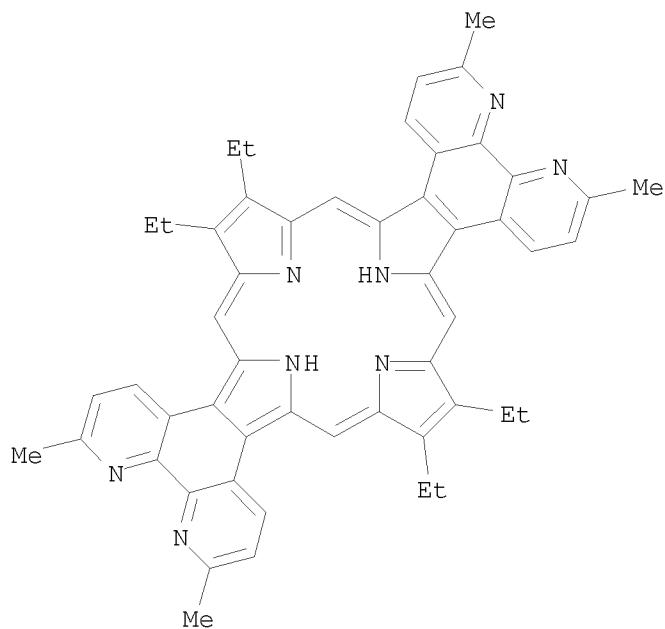
RN 872452-66-9 CAPLUS

CN 39H,41H-Tri[1,10]phenanthrolino[5,6-b:5',6'-g:5'',6''-l]porphine,
19,20-diethyl-2,10,13,26,29,37-hexamethyl- (9CI) (CA INDEX NAME)



RN 872452-75-0 CAPLUS

CN 33H,35H-Di[1,10]phenanthrolino[5,6-b:5',6'-l]porphine,
12,13,28,29-tetraethyl-3,6,19,22-tetramethyl- (9CI) (CA INDEX NAME)

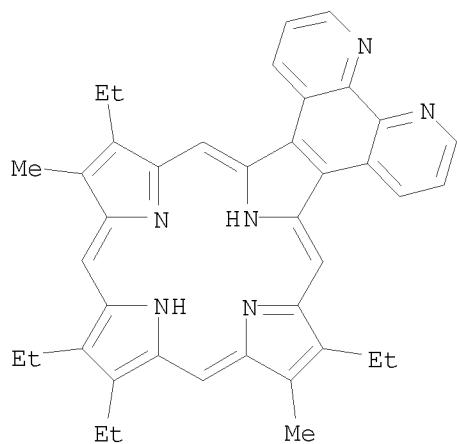


IT 172806-00-7P 172806-03-0P 872452-63-6P
872452-64-7P 872452-74-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
(efficient syntheses of phenanthrolinoporphyrins)

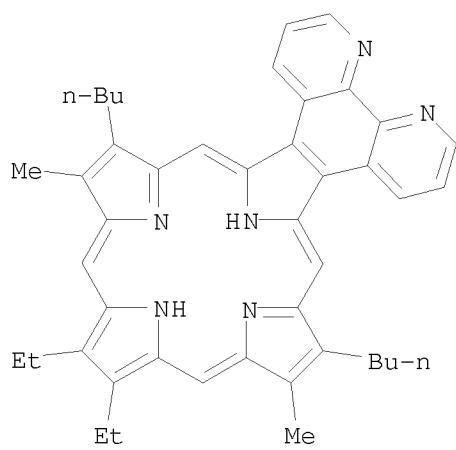
RN 172806-00-7 CAPLUS

CN 27H,29H-[1,10]Phenanthrolino[5,6-b]porphine,
12,17,18,23-tetraethyl-13,22-dimethyl- (9CI) (CA INDEX NAME)



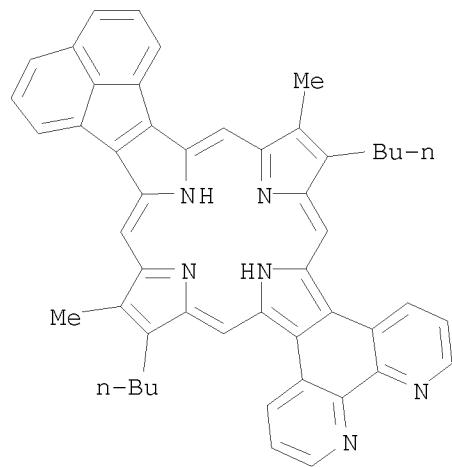
RN 172806-03-0 CAPLUS

CN 27H,29H-[1,10]Phenanthrolino[5,6-b]porphine,
12,23-dibutyl-17,18-diethyl-13,22-dimethyl- (9CI) (CA INDEX NAME)



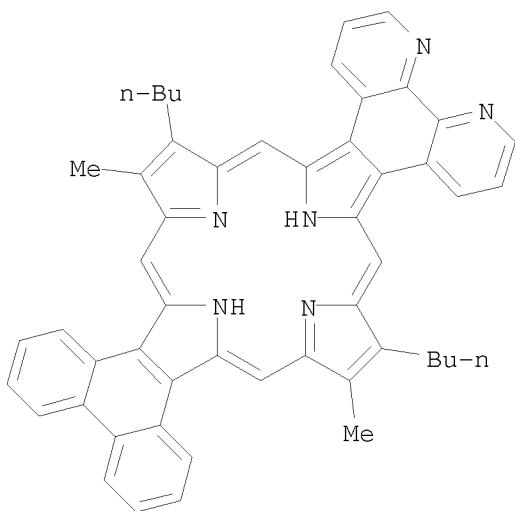
RN 872452-63-6 CAPLUS

CN 31H,33H-Acenaphtho[1,2-b][1,10]phenanthrolino[5,6-1]porphine,
12,27-dibutyl-13,26-dimethyl- (9CI) (CA INDEX NAME)



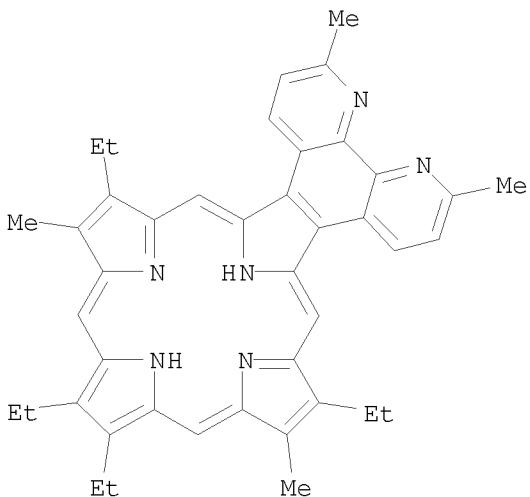
RN 872452-64-7 CAPLUS

CN 33H,35H-Phenanthro[9,10-b][1,10]phenanthrolino[5,6-1]porphine,
12,29-dibutyl-13,28-dimethyl- (9CI) (CA INDEX NAME)



RN 872452-74-9 CAPLUS

CN 27H,29H-[1,10]Phenanthrolino[5,6-b]porphine,
12,17,18,23-tetraethyl-3,6,13,22-tetramethyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 108 THERE ARE 108 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L9 ANSWER 15 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:1060945 CAPLUS

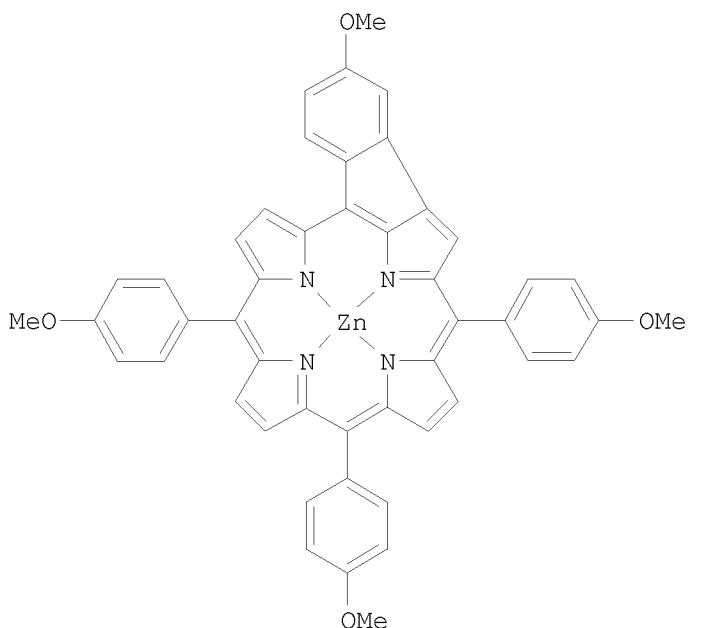
DOCUMENT NUMBER: 144:31616

TITLE: A novel and facile Zn-mediated intramolecular five-membered cyclization of β -tetraarylporphyrin radicals from β -bromotetraarylporphyrins

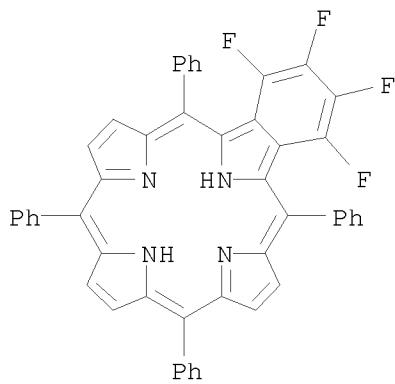
AUTHOR(S): Shen, Dong-Mei; Liu, Chao; Chen, Qing-Yun

Key Laboratory of Organofluorine Chemistry, Shanghai

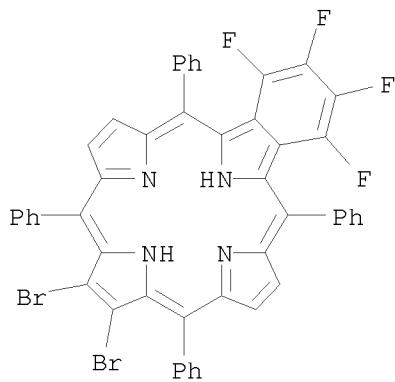
SOURCE: Institute of Organic Chemistry, Chinese Academy of Sciences, 354 Fenglin Road, 200032, Peop. Rep. China
Chemical Communications (Cambridge, United Kingdom) (2005), (39), 4982-4984
CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 144:31616
GI



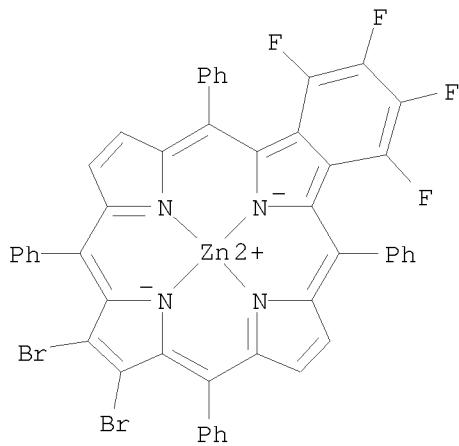
AB A novel and facile method for the Zn-mediated intramol. cyclization of β -porphyrin radicals has been developed for the convenient and effective construction of newly fused five-membered porphyrin systems from readily available β -bromotetraarylporphyrins. Reacting the Zn-coordinated porphyrins with Zn/DMSO gave the cyclized product, e.g. I.
IT 848394-52-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(Zn-mediated intramol. cyclization of β -bromotetraarylporphyrins)
RN 848394-52-5 CAPLUS
CN 23H,25H-Benz[b]porphine, 1,2,3,4-tetrafluoro-6,11,16,21-tetraphenyl- (CA INDEX NAME)



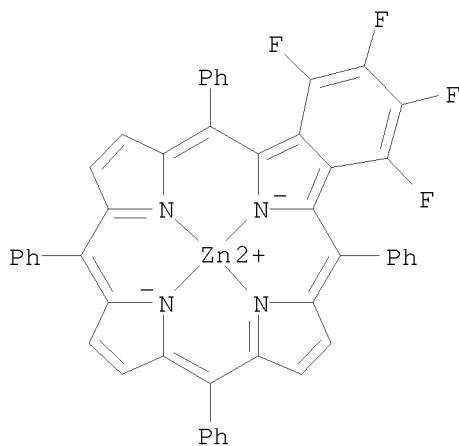
IT 870251-21-1P 870251-39-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(Zn-mediated intramol. cyclization of β -bromotetraarylporphyrins)
RN 870251-21-1 CAPLUS
CN 23H,25H-Benzo[b]porphine, 13,14-dibromo-1,2,3,4-tetrafluoro-6,11,16,21-tetr phenyl- (9CI) (CA INDEX NAME)



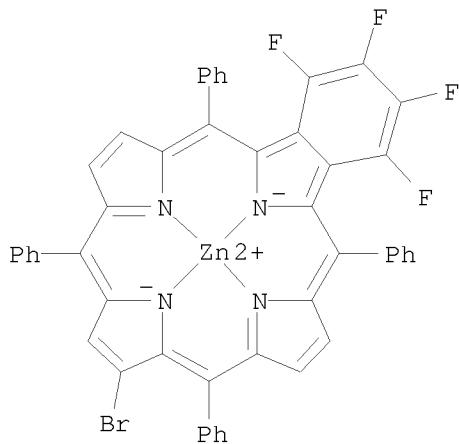
RN 870251-39-1 CAPLUS
CN Zinc, [13,14-dibromo-1,2,3,4-tetrafluoro-6,11,16,21-tetr phenyl-23H,25H- benzo[b]porphinato(2-) - κ N23, κ N24, κ N25, κ N26]-, (SP-4-1)- (9CI) (CA INDEX NAME)



IT 848394-49-0P 870251-23-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(Zn-mediated intramol. cyclization of β -bromotetraarylporphyrins)
RN 848394-49-0 CAPLUS
CN Zinc, [1,2,3,4-tetrafluoro-6,11,16,21-tetraphenyl-23H,25H-
benzo[b]porphinato(2-)- κ N23, κ N24, κ N25, κ N26]-,
(SP-4-1)- (CA INDEX NAME)



RN 870251-23-3 CAPLUS
CN Zinc, [13-bromo-1,2,3,4-tetrafluoro-6,11,16,21-tetraphenyl-23H,25H-
benzo[b]porphinato(2-)- κ N23, κ N24, κ N25, κ N26]-,
(SP-4-2)- (9CI) (CA INDEX NAME)



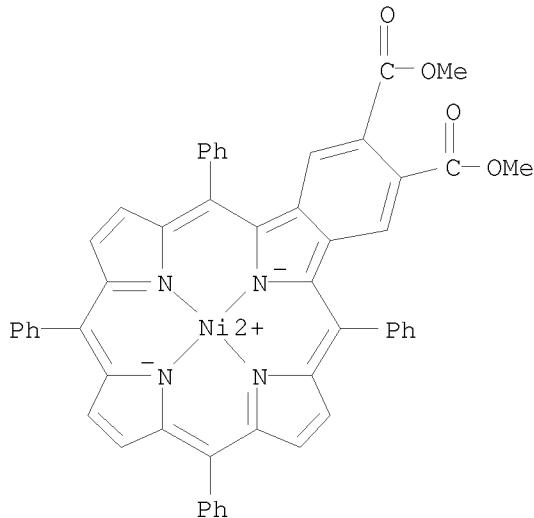
REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 16 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2005:1024795 CAPLUS
 DOCUMENT NUMBER: 143:487781
 TITLE: Diels-Alder reactions of pyrrolo[3,4-b]porphyrins
 AUTHOR(S): Liu, Wei; Fronczek, Frank R.; Vicente, M. Graca H.; Smith, Kevin M.
 CORPORATE SOURCE: Department of Chemistry, Louisiana State University, Baton Rouge, LA, 70803, USA
 SOURCE: Tetrahedron Letters (2005), 46(43), 7321-7324
 CODEN: TELEAY; ISSN: 0040-4039
 PUBLISHER: Elsevier B.V.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 143:487781
 GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB In the presence of excess dimethylacetylene dicarboxylate (DMAD), Ni(II) pyrrolo[3,4-b]porphyrins undergo both Diels-Alder cycloaddn. and Michael addition in toluene to give two bis-adducts, identified as compds. I and II; the reaction can be accelerated by the addition of Lewis or Bronsted-Lowry acids. Refluxing the reaction mixture in 1,2,4-trichlorobenzene (220°) leads to a Ni(II) monobenzoporphyrin as the main product. The structure of compound I was confirmed by x-ray crystallog.
 IT 255366-66-6P
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process) (preparation from Diels-Alder cycloaddn. and Michael addition of nickel pyrroloporphyrin with dimethylacetylene dicarboxylate)
 RN 255366-66-6 CAPLUS
 CN Nickel, [dimethyl 6,11,16,21-tetraphenyl-23H,25H-benzo[b]porphine-2,3-

dicarboxylato(2-)–κN23,κN24,κN25,κN26]–, (SP-4-1)–
(9CI) (CA INDEX NAME)



REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 17 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2005:645336 CAPLUS
 DOCUMENT NUMBER: 143:317778
 TITLE: Enlarged π -electronic network of a meso-meso,
 β - β , β - β triply linked
 dibenzoporphyrin dimer that exhibits a large
 two-photon absorption cross section
 AUTHOR(S): Inokuma, Yasuhide; Ono, Noboru; Uno, Hidemitsu; Kim,
 Deok Yun; Noh, Soo Bum; Kim, Dongho; Osuka, Atsuhiro
 CORPORATE SOURCE: Department of Chemistry, Graduate School of Science,
 Kyoto University, Sakyo-ku, Kyoto, 606-8502, Japan
 SOURCE: Chemical Communications (Cambridge, United Kingdom)
 (2005), (30), 3782-3784
 CODEN: CHCOFS; ISSN: 1359-7345
 PUBLISHER: Royal Society of Chemistry
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 143:317778
 GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Enlargement of the π -electronic network of meso-meso, β - β ,
 β - β triply linked diporphyrin was exploited by preparing a
 corresponding dibenzo-fused porphyrin dimer that exhibits a perturbed
 absorption spectrum and a large two-photon absorption cross section. The
 dibenzo-fused porphyrin dimer (I; Ar = 4-tert-butylphenyl) was prepared from

the monomeric zinc porphyrin derivative (II) via coupling and retro Diels-Alder reactions. The crystal structure of the meso-meso singly linked dimeric zinc dibenzoporphyrin precursor of complex I was determined. The electrochem. properties of these complexes were also examined.

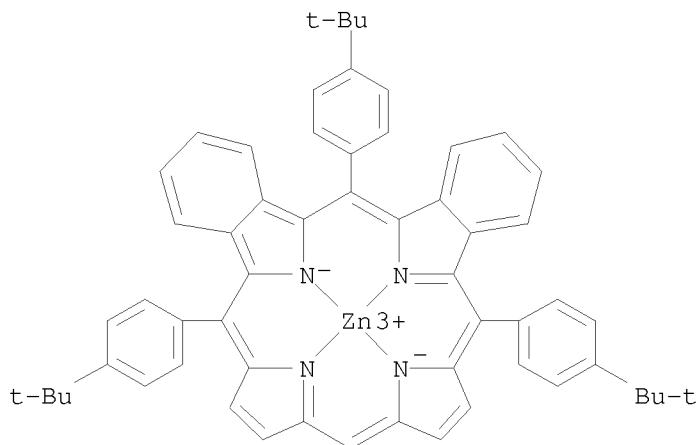
IT 864919-90-4 864919-91-5 864919-96-0
 864919-97-1 864919-98-2 864919-99-3
 864920-00-3 864920-01-4 864920-02-5
 864920-03-6

RL: CPS (Chemical process); FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); FORM (Formation, nonpreparative); PROC (Process)

(elec. potential of couple containing)

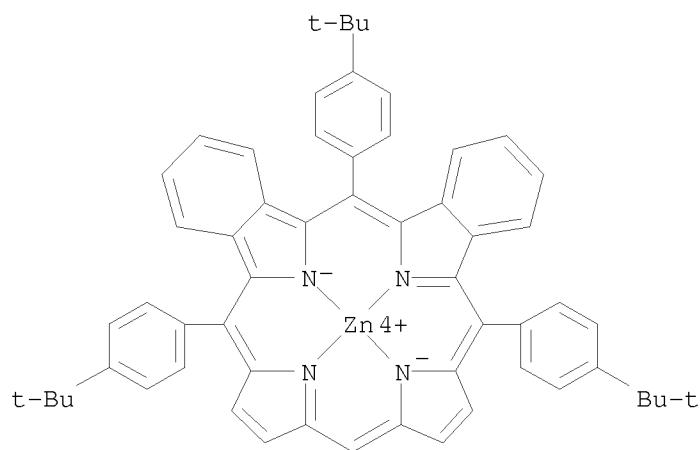
RN 864919-90-4 CAPLUS

CN Zinc(1+), [5,10,15-tris[4-(1,1-dimethylethyl)phenyl]-21H,23H-porphinato(2-) -κN21,κN22,κN23,κN24]-, (SP-4-2)- (9CI) (CA
 INDEX NAME)



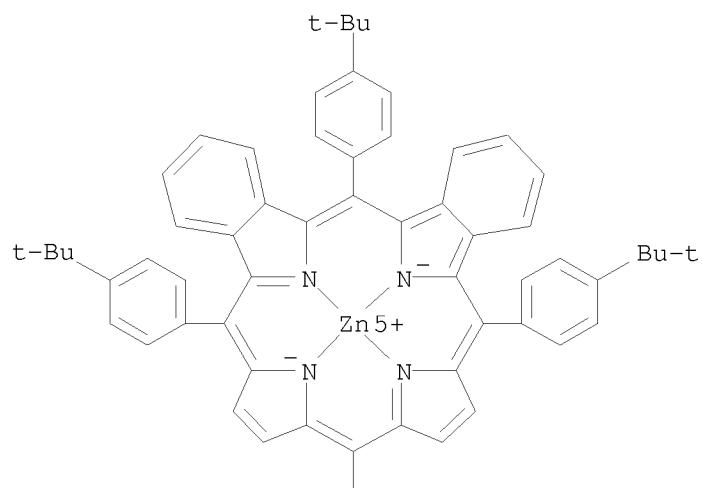
RN 864919-91-5 CAPLUS

CN Zinc(2+), [5,10,15-tris[4-(1,1-dimethylethyl)phenyl]-21H,23H-porphinato(2-) -κN21,κN22,κN23,κN24]-, (SP-4-2)- (9CI) (CA
 INDEX NAME)

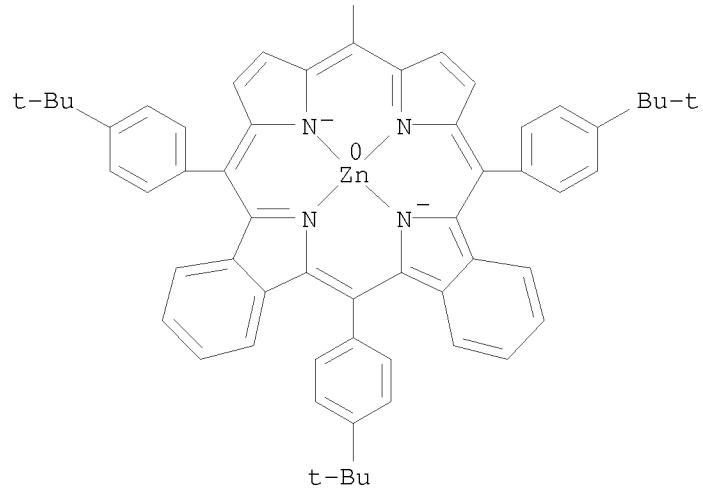


RN 864919-96-0 CAPLUS
CN Zinc(1+), [μ -[6,6',16,16',23,23'-hexakis[4-(1,1-dimethylethyl)phenyl]-11,11'-bi-25H,27H-dibenzo[b,g]porphinato(4-) -
.kappa N25, .kappa N26, .kappa N27, .kappa N28 : .kappa N25', .kappa N26', .kappa
.N27', .kappa N28']]di- (9CI) (CA INDEX NAME)

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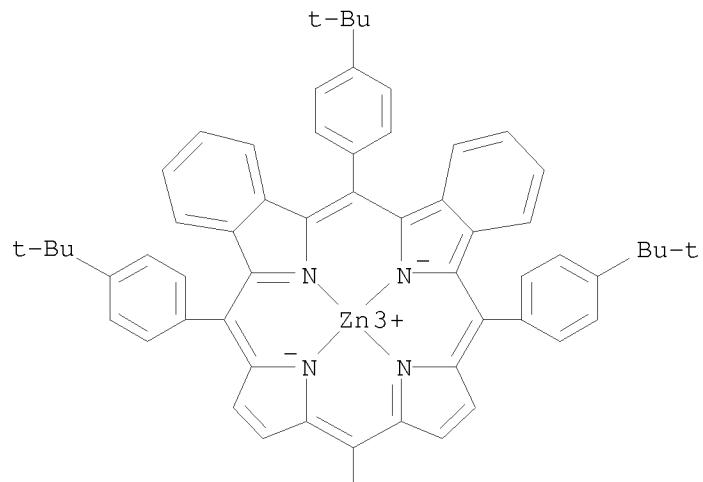
PAGE 2-A



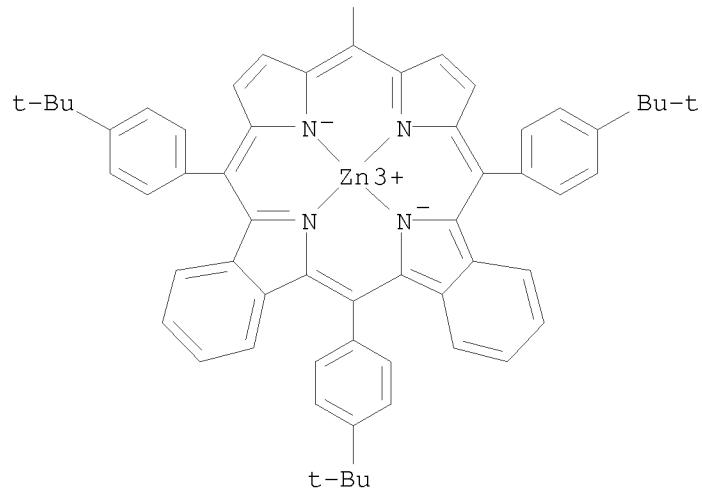
RN 864919-97-1 CAPLUS

CN Zinc(2+), [μ -[6,6',16,16',23,23'-hexakis[4-(1,1-dimethylethyl)phenyl]-11,11'-bi-25H,27H-dibenzo[b,g]porphinato(4-)-
 κ N25, κ N26, κ N27, κ N28: κ N25', κ N26', κ N27', κ N28']]di- (9CI) (CA INDEX NAME)

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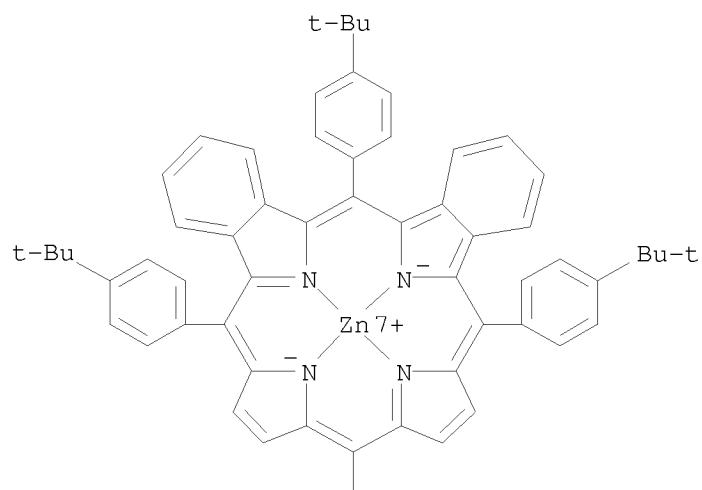
PAGE 2-A



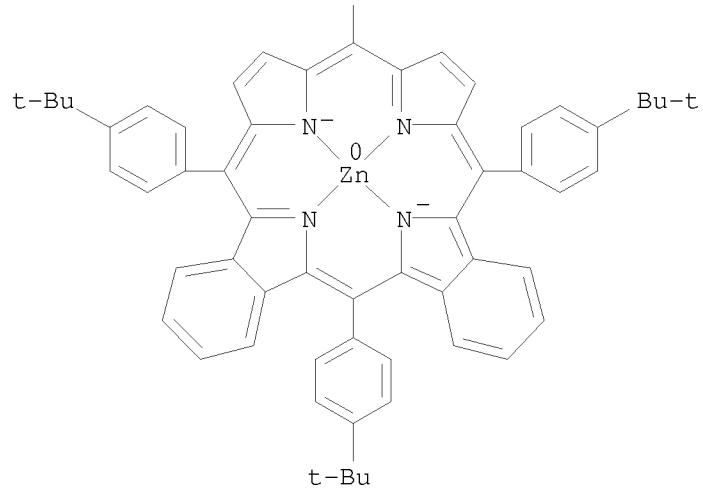
RN 864919-98-2 CAPLUS

CN Zinc(3+), [μ -[6,6',16,16',23,23'-hexakis[4-(1,1-dimethylethyl)phenyl]-11,11'-bi-25H,27H-dibenzo[b,g]porphinato(4-) - κ N25, κ N26, κ N27, κ N28: κ N25', κ N26', κ N27', κ N28']]di- (9CI) (CA INDEX NAME)

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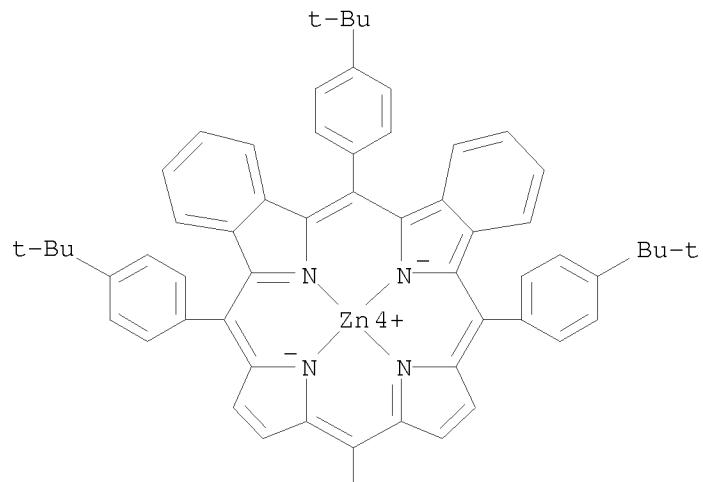
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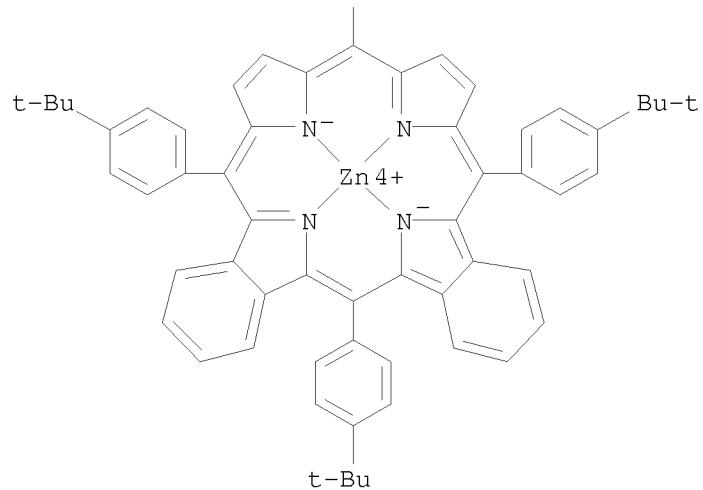
RN 864919-99-3 CAPLUS

CN Zinc(4+), [μ -[6,6',16,16',23,23'-hexakis[4-(1,1-dimethylethyl)phenyl]-11,11'-bi-25H,27H-dibenzo[b,g]porphinato(4-)-
 κ N25, κ N26, κ N27, κ N28: κ N25', κ N26', κ N27', κ N28']]di- (9CI) (CA INDEX NAME)

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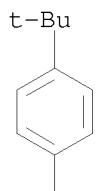
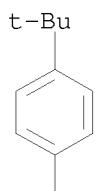
PAGE 2-A



RN 864920-00-3 CAPLUS

CN Zinc(1+), [μ-[6,6',16,16',23,23'-hexakis[4-(1,1-dimethylethyl)phenyl]-9,9':11,11':13,13'-bis(25H,27H-dibenzo[b,g]porphinato)(4-)-κN25,κN26,κN27,κN28:κN25',κN26',.κappa.N27',κN28']]di- (9CI) (CA INDEX NAME)

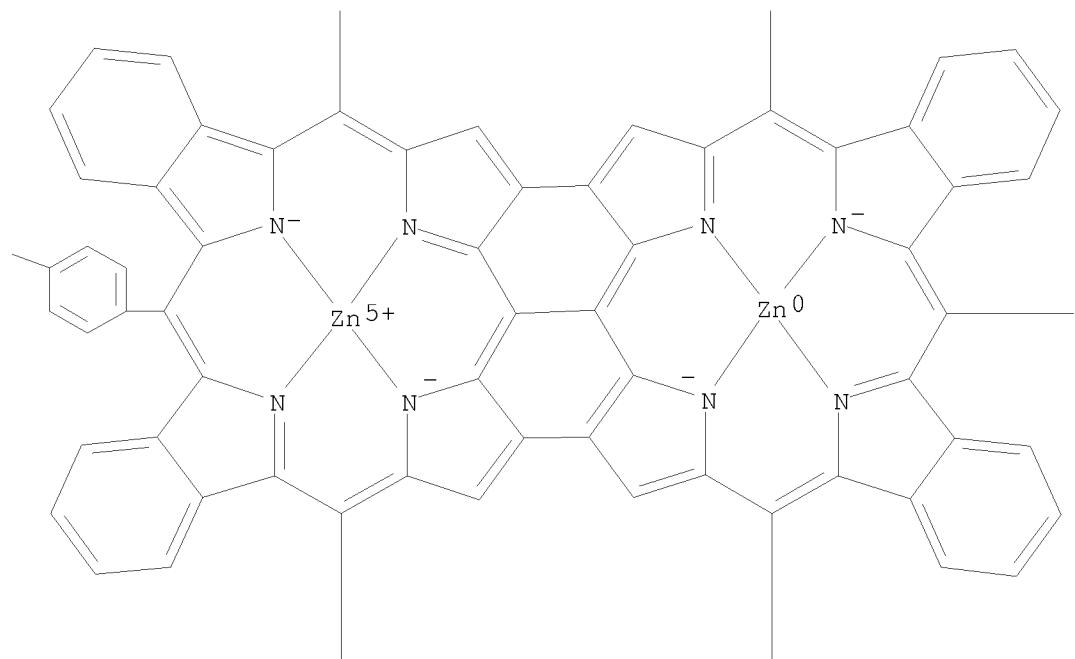
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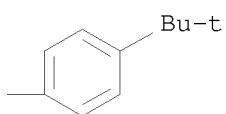
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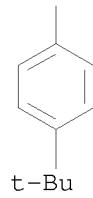
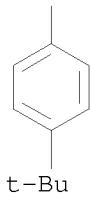
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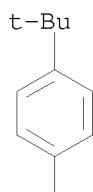
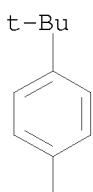
PAGE 3-B



RN 864920-01-4 CAPLUS

CN Zinc(2+), [μ -[6,6',16,16',23,23'-hexakis[4-(1,1-dimethylethyl)phenyl]-9,9':11,11':13,13'-bis(25H,27H-dibenzo[b,g]porphinato)(4-)-
 κ N25, κ N26, κ N27, κ N28: κ N25', κ N26', κ N27', κ N28']]di- (9CI) (CA INDEX NAME)

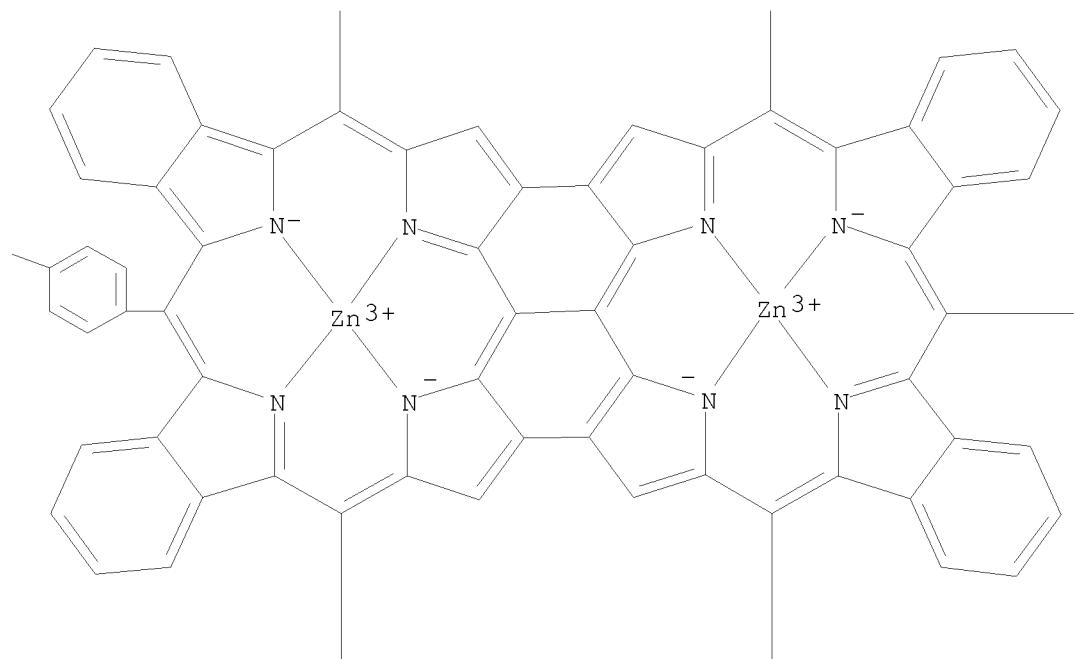
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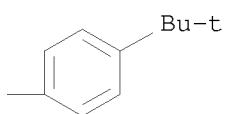
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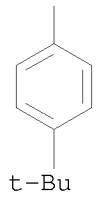
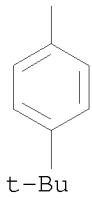
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PAGE 2-C



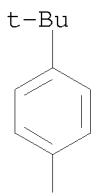
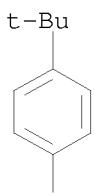
PAGE 3-B



RN 864920-02-5 CAPLUS

CN Zinc(3+), [μ -[6,6',16,16',23,23'-hexakis[4-(1,1-dimethylethyl)phenyl]-9,9':11,11':13,13'-bis(25H,27H-dibenzo[b,g]porphinato)(4-)-
 κ N25, κ N26, κ N27, κ N28: κ N25', κ N26', κ N27', κ N28']]di- (9CI) (CA INDEX NAME)

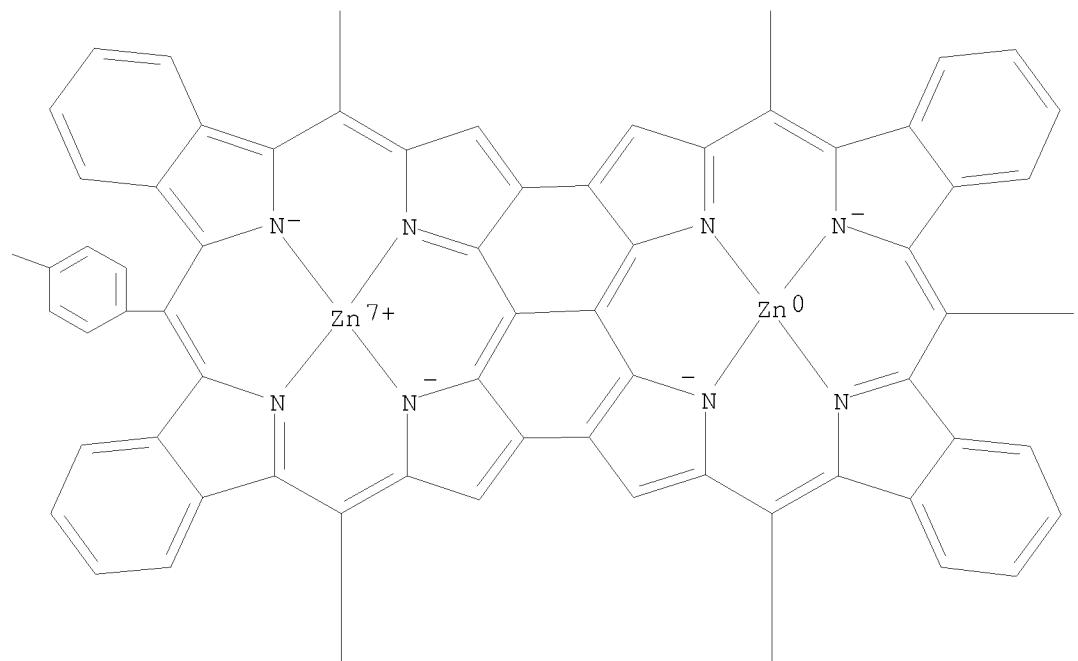
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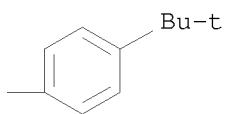
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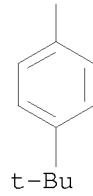
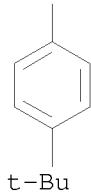
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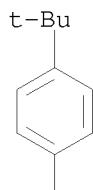
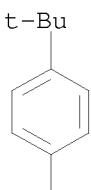
PAGE 3-B



RN 864920-03-6 CAPLUS

CN Zinc(4+), [μ -[6,6',16,16',23,23'-hexakis[4-(1,1-dimethylethyl)phenyl]-9,9':11,11':13,13'-bis(25H,27H-dibenzo[b,g]porphinato)(4-)-
 κ N25, κ N26, κ N27, κ N28: κ N25', κ N26', κ N27', κ N28']]di- (9CI) (CA INDEX NAME)

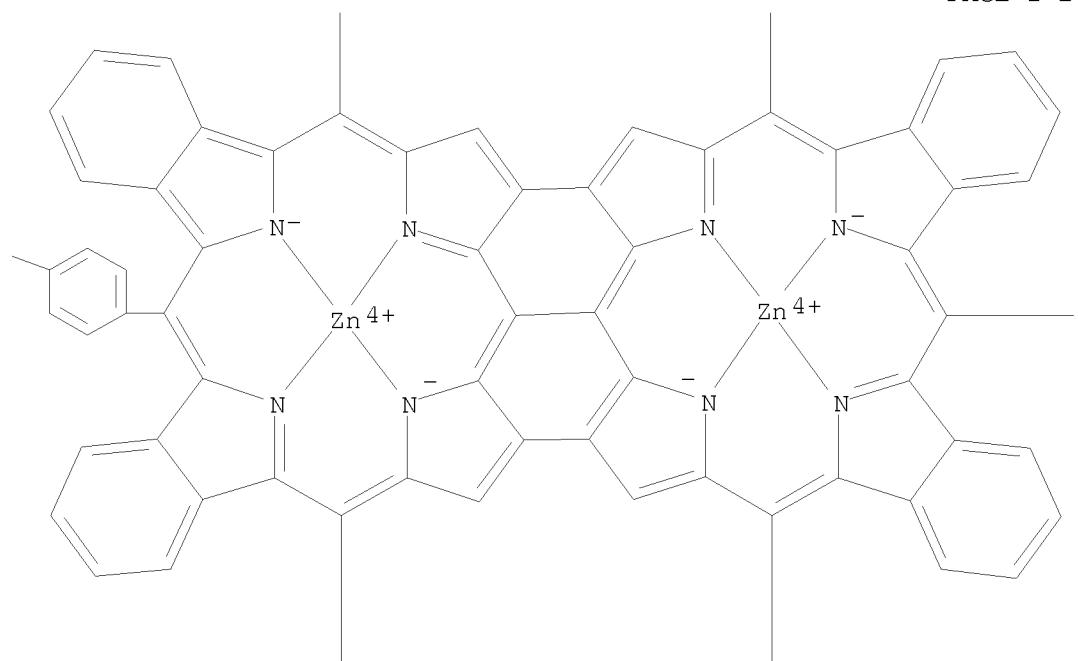
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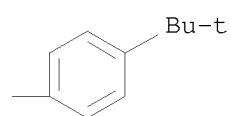
PAGE 2-A

t-Bu—

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PAGE 3-B



IT 864919-87-9P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (preparation and crystal structure of meso-meso singly linked zinc
 dibenzoporphyrin dimer)

RN 864919-87-9 CAPLUS

CN Zinc, [μ -[6,6',16,16',23,23'-hexakis[4-(1,1-dimethylethyl)phenyl]-
 11,11'-bi-25H,27H-dibenzo[b,g]porphinato(4-)-
 κ N25, κ N26, κ N27, κ N28: κ N25', κ N26',.kappa
 .N27', κ N28']]di-, compd. with pyridine (1:2) (9CI) (CA INDEX NAME)

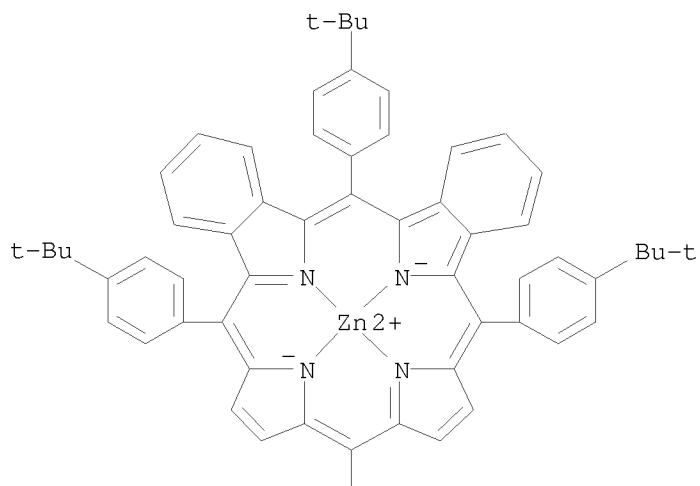
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CRN 864919-85-7

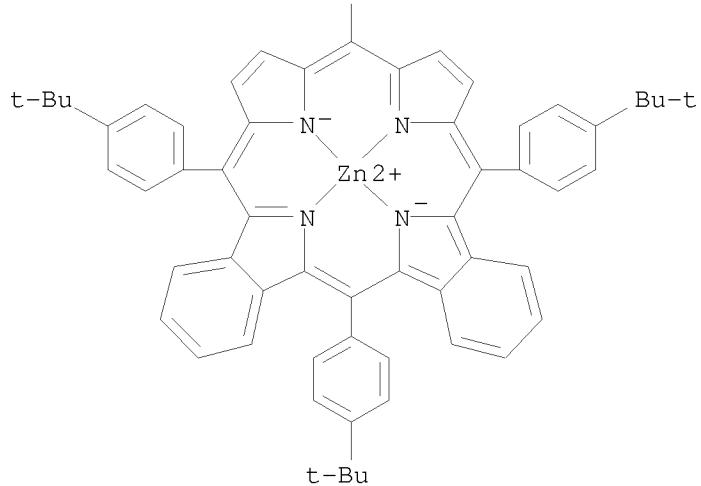
CMF C116 H102 N8 Zn2

CCI CCS

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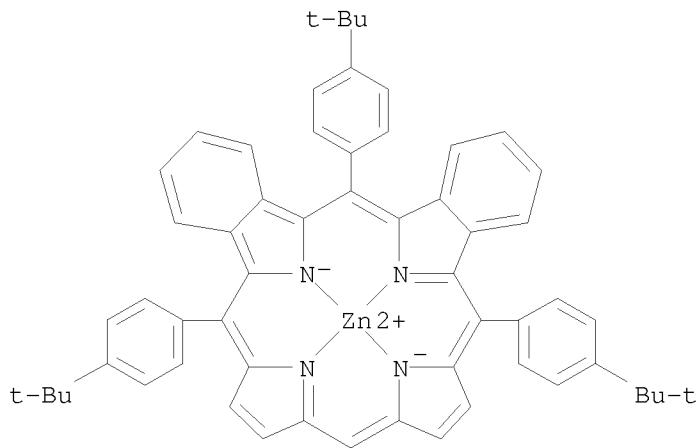
PAGE 2-A



CM 2

CRN 110-86-1
CMF C5 H5 N

IT 864919-82-4P
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
 (preparation and electrochem. properties of monomeric zinc dibenzoporphyrin)
 RN 864919-82-4 CAPLUS
 CN Zinc, [5,10,15-tris[4-(1,1-dimethylethyl)phenyl]-21H,23H-porphinato(2-) -
 κN21,κN22,κN23,κN24]-, (SP-4-2)- (9CI) (CA INDEX
 NAME)



IT 864919-85-7P

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent) (preparation, electrochem. properties and coupling reaction for preparation

of

zinc dibenzoporphyrin triply linked dimer)

RN 864919-85-7 CAPLUS

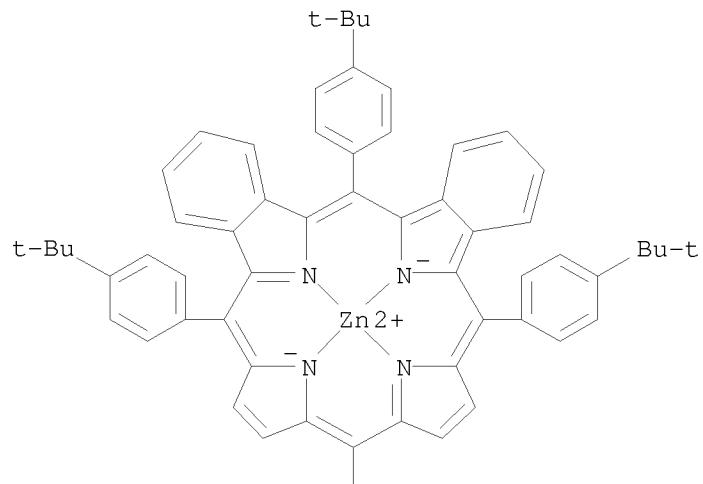
CN Zinc, [μ -[6,6',16,16',23,23'-hexakis[4-(1,1-dimethylethyl)phenyl]-

11,11'-bi-25H,27H-dibenzo[b,g]porphinato(4)-

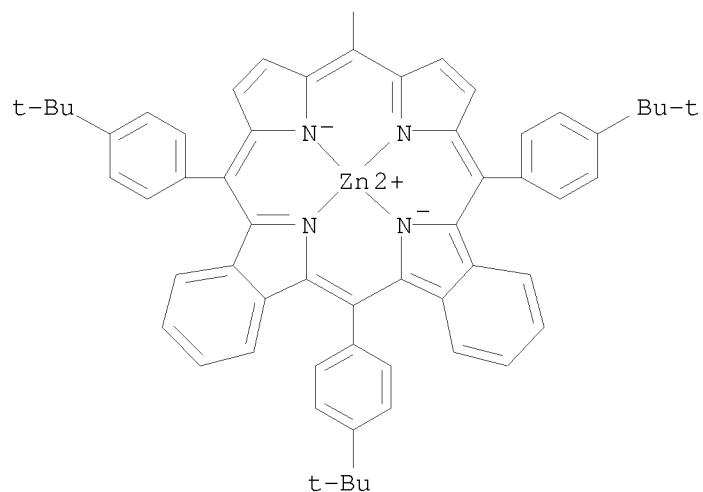
κ N25, κ N26, κ N27, κ N28: κ N25', κ N26',. κ

.N27', κ N28']]di- (9CI) (CA INDEX NAME)

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IT 864919-86-8P

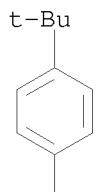
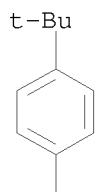
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)

(preparation, electrochem. properties and two-photon absorption spectrum of zinc dibenzoporphyrin triply linked dimer)

RN 864919-86-8 CAPLUS

CN Zinc, [μ -[6,6',16,16',23,23'-hexakis[4-(1,1-dimethylethyl)phenyl]-9,9':11,11':13,13'-bis(25H,27H-dibenzo[b,g]porphinato)(4-)-
 κ N25, κ N26, κ N27, κ N28: κ N25', κ N26', κ N27', κ N28']]di- (9CI) (CA INDEX NAME)

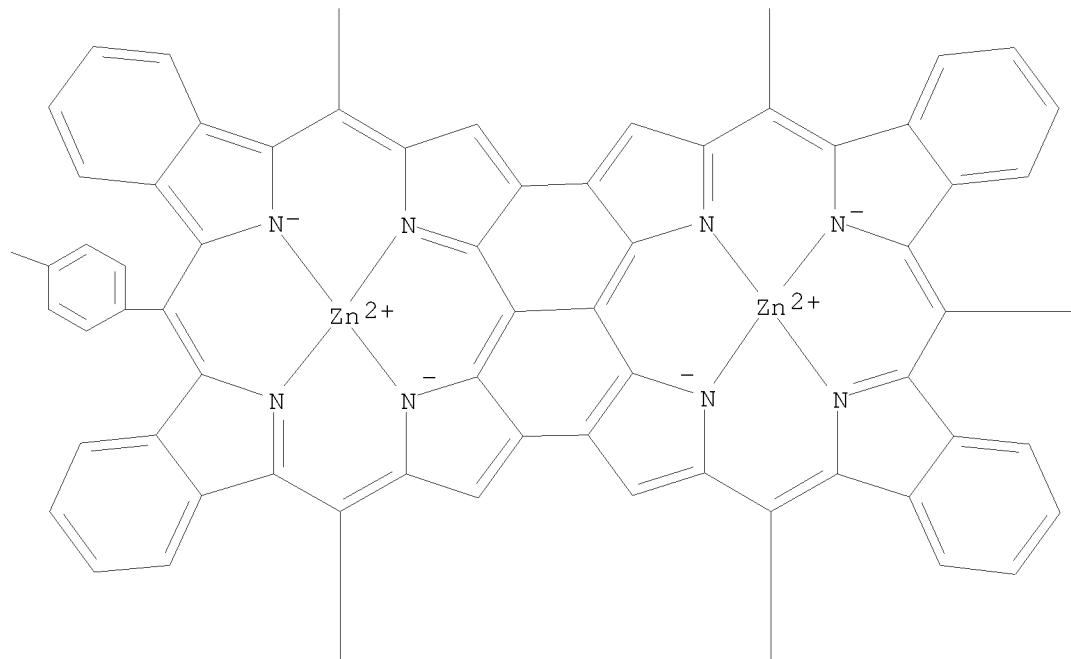
PAGE 1-B



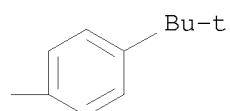
PAGE 2-A

t-Bu

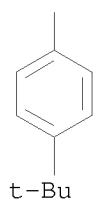
PAGE 2-B



PAGE 2-C



PAGE 3-B



REFERENCE COUNT:

34

THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 18 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:506595 CAPLUS
DOCUMENT NUMBER: 143:125238
TITLE: Diels-Alder reactions of
beta-vinyl-meso-tetraphenylporphyrin with quinones
AUTHOR(S): Faustino, Maria A. F.; Neves, Maria G. P. M. S.; Tome,
Augusto C.; Silva, Artur M. S.; Cavaleiro, Jose A. S.
CORPORATE SOURCE: Department of Chemistry, University of Aveiro, Aveiro,
3810-193, Port.
SOURCE: ARKIVOC (Gainesville, FL, United States) (2005), (9),
332-343
CODEN: AGFUAR
URL: http://www.arkat-usa.org/ark/journal/2005/I09_Molina-Elguero/1324/ME-1324H.pdf
PUBLISHER: Arkat USA Inc.
DOCUMENT TYPE: Journal; (online computer file)
LANGUAGE: English
OTHER SOURCE(S): CASREACT 143:125238
GI

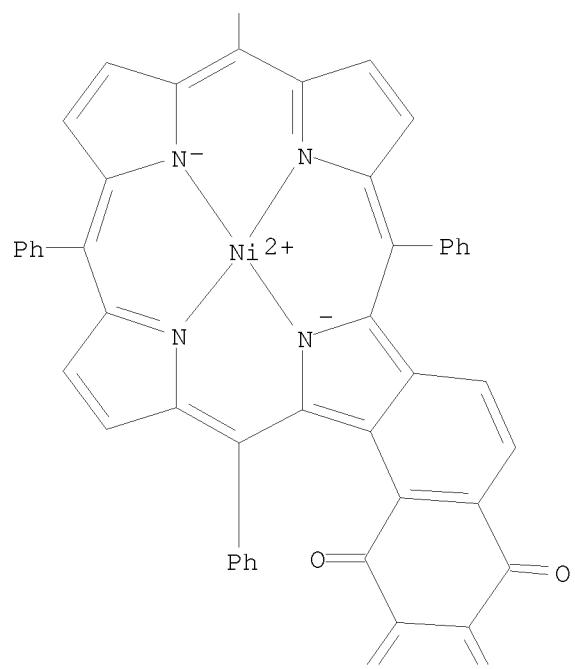
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Ni(II)-2-vinyl-5,10,15,20-tetraphenylporphyrin reacts with
1,4-naphthoquinone and 1,4-benzoquinone to afford mixts. of rigid
porphyrin-quinone derivs. (I-III and analogous benzoquinone derivs.,
resp.) with extended π -systems. The structures of these novel compds.
were deduced from detailed NMR expts.
IT 857254-04-7P 857254-05-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and demetalation of product of Diels-Alder reaction of
nickel(II) beta-vinyl-meso-tetraphenylporphyrin with naphthoquinone)
RN 857254-04-7 CAPLUS
CN Nickel, [2,7,12,17-tetraphenyl-27H,29H-anthra[1,2-b]porphine-21,26-
dionato(2-)-
 κ N27,
 κ N28,
 κ N29,
 κ N30]-, (SP-4-2)- (9CI)
(CA INDEX NAME)

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Ph

PAGE 2-A



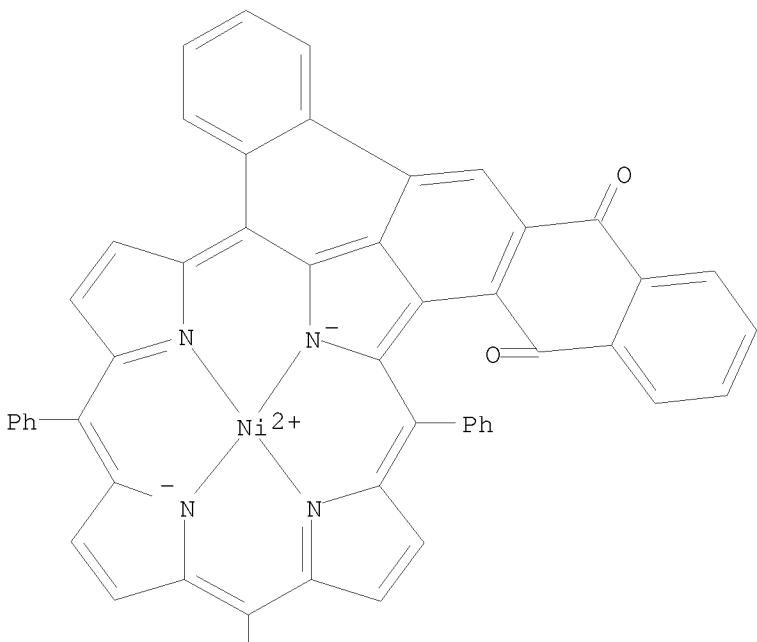
PAGE 3-A



RN 857254-05-8 CAPLUS

CN Nickel, [2,7,12-triphenyl-17,19[1',2']-benzeno-27H,29H-anthra[1,2-b]porphine-21,26-dionato(2-)–κN27,κN28,κN29,κN30]–, (SP-4-2)– (9CI) (CA INDEX NAME)

PAGE 1-A



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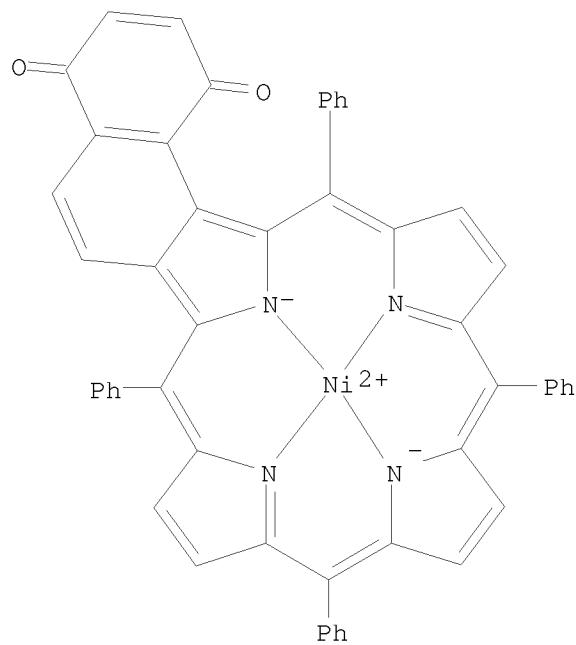


IT 857254-07-0P 857254-08-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation by Diels-Alder reaction of nickel(II)
beta-vinyl-meso-tetraphenylporphyrin with benzoquinone)

RN 857254-07-0 CAPLUS

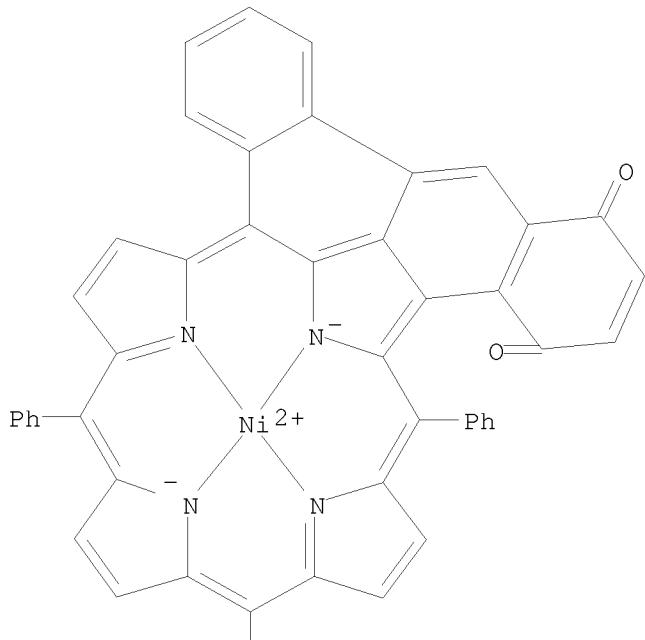
CN Nickel, [8,13,18,23-tetraphenyl-25H,27H-naphtho[1,2-b]porphine-1,4-dionato(2-)–κN25,κN26,κN27,κN28]–, (SP-4-2)– (9CI)
(CA INDEX NAME)



RN 857254-08-1 CAPLUS

CN Nickel, [12,15,18-triphenyl-6,8[1',2']-benzeno-25H,27H-naphtho[1,2-b]porphine-1,4-dionato(2-) - κ N25, κ N26, κ N27, κ N28]-,
(SP-4-2)- (9CI) (CA INDEX NAME)

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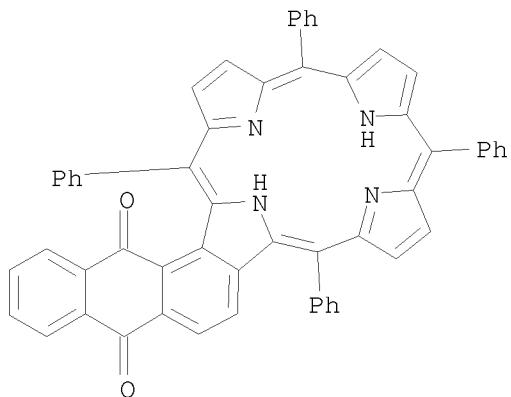


IT 857254-10-5P 857254-11-6P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation by Diels-Alder reaction of nickel(II)
 beta-vinyl-meso-tetraphenylporphyrin with naphthoquinone followed by
 demetalation)

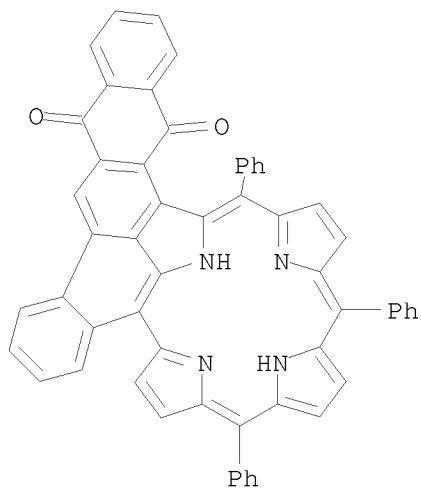
RN 857254-10-5 CAPLUS

CN 27H,29H-Anthra[1,2-b]porphine-21,26-dione, 2,7,12,17-tetraphenyl- (9CI)
 (CA INDEX NAME)



RN 857254-11-6 CAPLUS

CN 17,19[1',2']-Benzeno-27H,29H-anthra[1,2-b]porphine-21,26-dione,
 2,7,12-triphenyl- (9CI) (CA INDEX NAME)

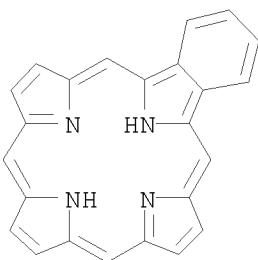


REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 19 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:237611 CAPLUS
DOCUMENT NUMBER: 143:172462
TITLE: Instability of the molecular structure of monobenzoporphin to the alternation of the macrocycle bond lengths and its manifestation in the electronic spectra
AUTHOR(S): Kuz'mitskii, V. A.
CORPORATE SOURCE: Institute of Molecular and Atomic Physics, National Academy of Sciences of Belarus, Minsk, 220072, Belarus
SOURCE: Journal of Applied Spectroscopy (2004), 71(6), 777-787
CODEN: JASYAP; ISSN: 0021-9037
PUBLISHER: Springer Science+Business Media, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

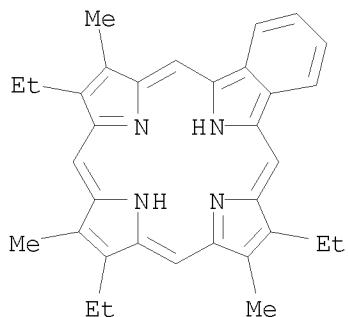
AB Quantum-chemical calcns. of the geometric structure of the mols. of monobenzoporphin (H_2 MBP) and monobenzoporphin with Me and Et substituents in the five-member rings (H_2MBPm) were carried out by the restricted and UHF methods with the AM1 Hamiltonian (AM1 RHF and AM1 UHF methods). The calcn. of the above-indicated mols. by the AM1 RHF method without restrictions on their symmetry gave, for them, a planar structure with an alternation of the lengths of the bonds along the 18-member azacyclopolyene and the symmetry $C\ 1h$ for their aromatic part. The calcn. of the transitions to the excited electron Q states in such a structure by the CNDO/S method showed that these states are characterized by large hypsochromic shifts (.apprx.3000-4000 cm⁻¹) relative to the Q levels of porphin (H_2P), which is in contradiction with the exptl. data, according to which these shifts are bathochromic and comprise = -330 cm⁻¹ and = -750 cm⁻¹. Optimization of the geometry of the H_2 MBP and H_2MBPm mols. by the AM1 UHF method gives, for them, a structure with equal lengths of the bonds along the 18-member azacyclopolyene with a symmetry differing insignificantly from the D_{2h} symmetry; elements of the structure with a lower symmetry and an alternation of the lengths of the bonds are retained in the condensed pyrrolenine and benzene rings. The calcn. of the shifts of the Q levels in the H_2MBPm mol. of this geometry relative to the analogous levels in H_2P showed that they are bathochromic and equal to = -520 cm⁻¹, and the RHF calcn. with optimization of the geometry of the mol. and restrictions on the effective symmetry D_{2h} of the 18-member azacyclopolyene gave = -350 cm⁻¹ and = -430 cm⁻¹. The restrictions imposed on the C_{2v} symmetry of the H_2MBP mols. by the RHF method are inadequate to equalize the lengths of the bonds along the 18-member azacyclopolyene. The calcns. of the energy of the B levels of the monobenzoporphyrins considered also lend credence to their geometric structure with equal lengths of the bonds along the 18-member azacyclopolyene.

IT 36469-17-7, 23H,25H-Benzo[b]porphine 93614-17-6
RL: PRP (Properties)
(instability of mol. structure of monobenzoporphine to related to alternation of macrocycle bond lengths and manifestation in UV spectra)
RN 36469-17-7 CAPLUS
CN 23H,25H-Benzo[b]porphine (9CI) (CA INDEX NAME)



RN 93614-17-6 CAPLUS

CN 23H,25H-Benzo[b]porphine, 8,13,18-triethyl-9,14,19-trimethyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 20 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:199392 CAPLUS

DOCUMENT NUMBER: 142:430046

TITLE: Reaction of meso-tetraarylporphyrins with pyrazine ortho-quinodimethanes

AUTHOR(S): Zhao, Shengxian; Neves, Maria G. P. M. S.; Tome, Augusto C.; Silva, Artur M. S.; Cavaleiro, Jose A. S.; Domingues, Maria R. M.; Ferrer Correia, A. J. Department of Chemistry, University of Aveiro, Aveiro, 3810-193, Port.

CORPORATE SOURCE: Tetrahedron Letters (2005), 46(13), 2189-2191

SOURCE: CODEN: TELEAY; ISSN: 0040-4039

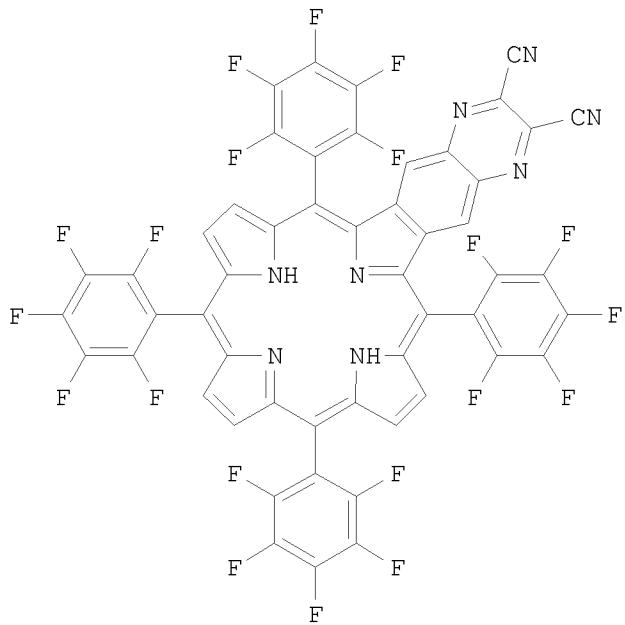
PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

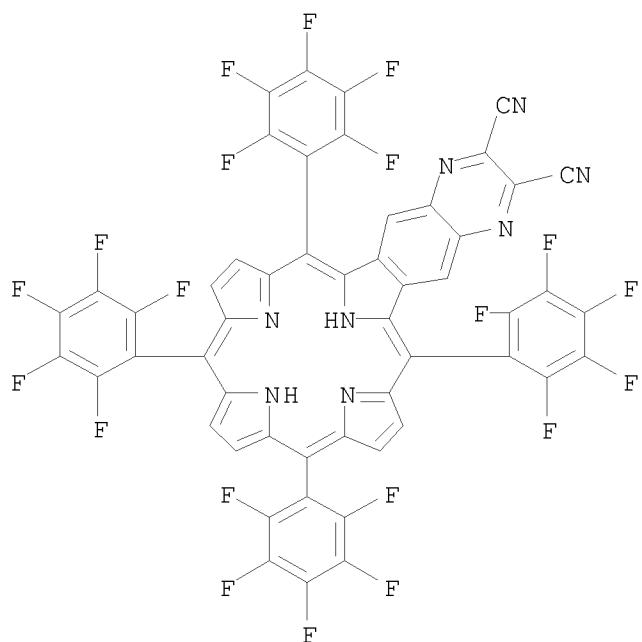
LANGUAGE: English

OTHER SOURCE(S): CASREACT 142:430046

GI

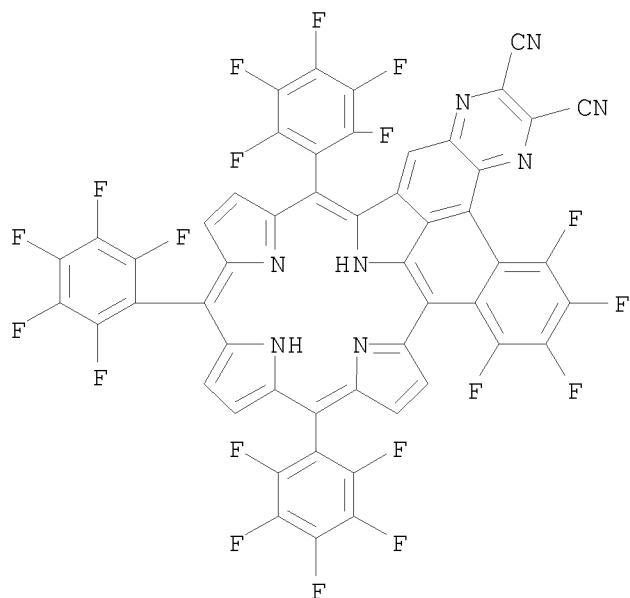


- AB Novel π -extended porphyrins, e.g. I, were obtained from the Diels-Alder reaction of meso-tetraarylporphyrins with a pyrazine o-quinodimethane derivative
- IT 850668-27-8P 850668-28-9P 850668-29-0P
850668-30-3P 850668-31-4P 850668-32-5P
850668-33-6P 850668-34-7P 850668-35-8P
850668-36-9P 850668-37-0P 850668-38-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(reaction of meso-tetraarylporphyrins with pyrazine
ortho-quinodimethanes)
- RN 850668-27-8 CAPLUS
- CN 25H,27H-Quinoxalino[6,7-b]porphine-2,3-dicarbonitrile,
7,12,17,22-tetrakis(pentafluorophenyl)- (9CI) (CA INDEX NAME)



RN 850668-28-9 CAPLUS

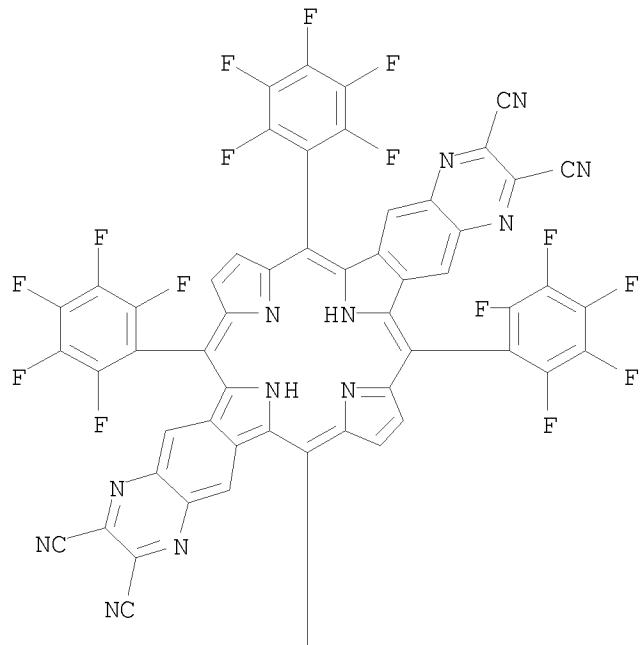
CN 5,7[1',2']-Benzeno-25H,27H-quinoxalino[6,7-b]porphine-2,3-dicarbonitrile,
31,32,33,34-tetrafluoro-12,17,22-tris(pentafluorophenyl)- (9CI) (CA INDEX
NAME)



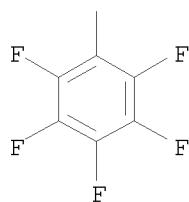
RN 850668-29-0 CAPLUS

CN 29H,31H-Diquinoxalino[6,7-b:6',7'-l]porphine-2,3,16,17-tetracarbonitrile,
7,12,21,26-tetrakis(pentafluorophenyl)- (9CI) (CA INDEX NAME)

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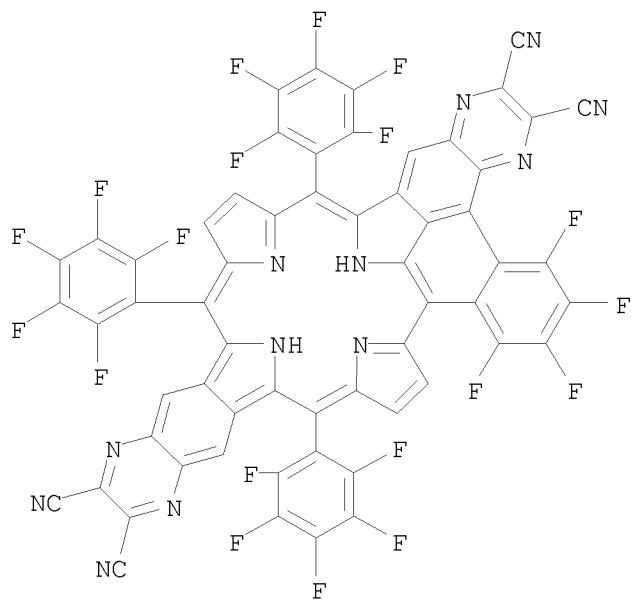


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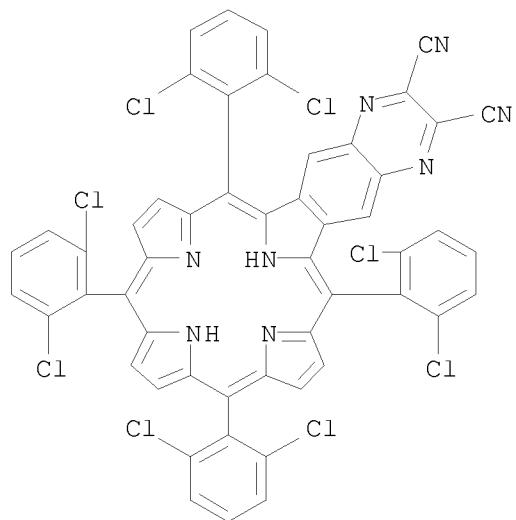
RN 850668-30-3 CAPLUS

CN 5,7[1',2']-Benzene-29H,31H-diquinoxalino[6,7-b:6',7'-l]porphine-2,3,16,17-tetracarbonitrile, 35,36,37,38-tetrafluoro-12,21,26-tris(pentafluorophenyl)- (9CI) (CA INDEX NAME)



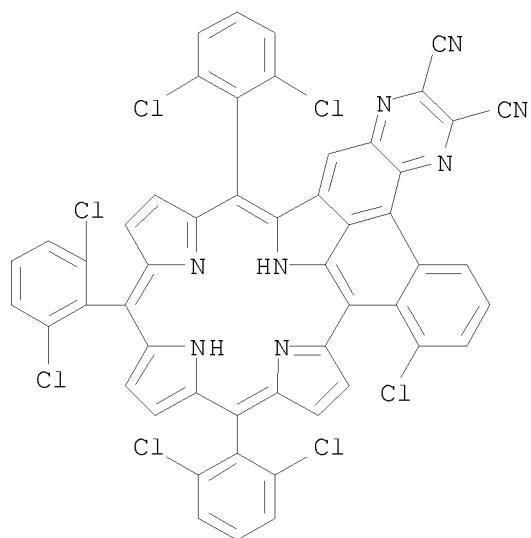
RN 850668-31-4 CAPLUS

CN 25H,27H-Quinoxalino[6,7-b]porphine-2,3-dicarbonitrile,
7,12,17,22-tetrakis(2,6-dichlorophenyl)- (9CI) (CA INDEX NAME)



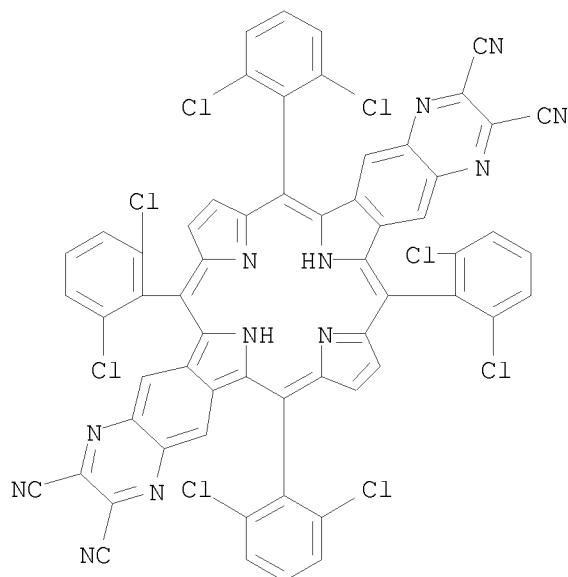
RN 850668-32-5 CAPLUS

CN 5,7[1',2']-Benzene-25H,27H-quinoxalino[6,7-b]porphine-2,3-dicarbonitrile,
34-chloro-12,17,22-tris(2,6-dichlorophenyl)- (9CI) (CA INDEX NAME)



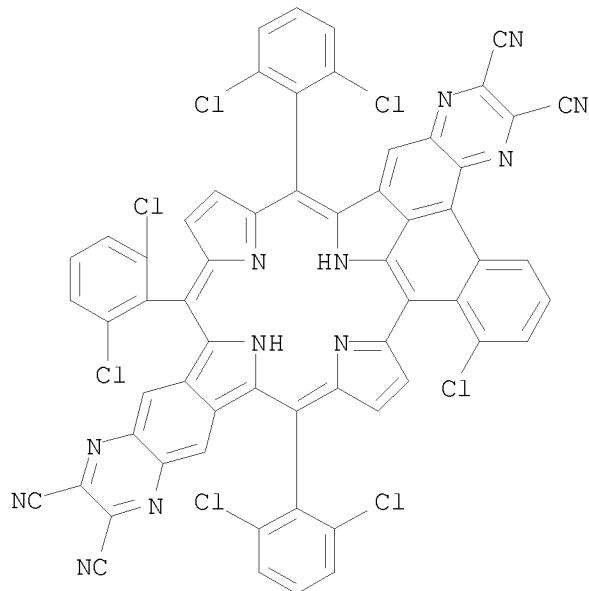
RN 850668-33-6 CAPLUS

CN 29H,31H-Diquinoxalino[6,7-b:6',7'-l]porphine-2,3,16,17-tetracarbonitrile,
7,12,21,26-tetrakis(2,6-dichlorophenyl)- (9CI) (CA INDEX NAME)

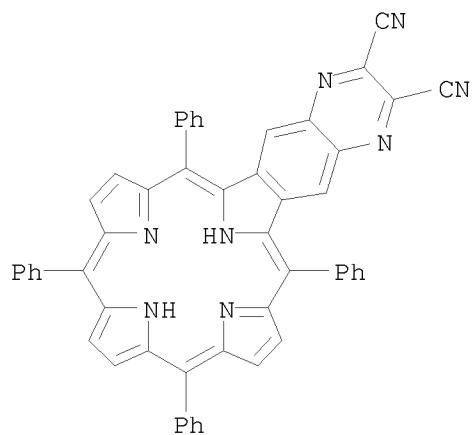


RN 850668-34-7 CAPLUS

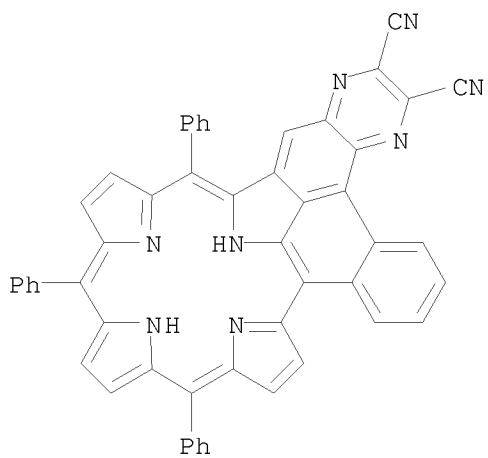
CN 5,7[1',2']-Benzene-29H,31H-diquinoxalino[6,7-b:6',7'-l]porphine-2,3,16,17-tetracarbonitrile, 38-chloro-12,21,26-tris(2,6-dichlorophenyl)- (9CI) (CA INDEX NAME)



RN 850668-35-8 CAPLUS
CN 25H,27H-Quinoxalino[6,7-b]porphine-2,3-dicarbonitrile,
7,12,17,22-tetraphenyl- (9CI) (CA INDEX NAME)

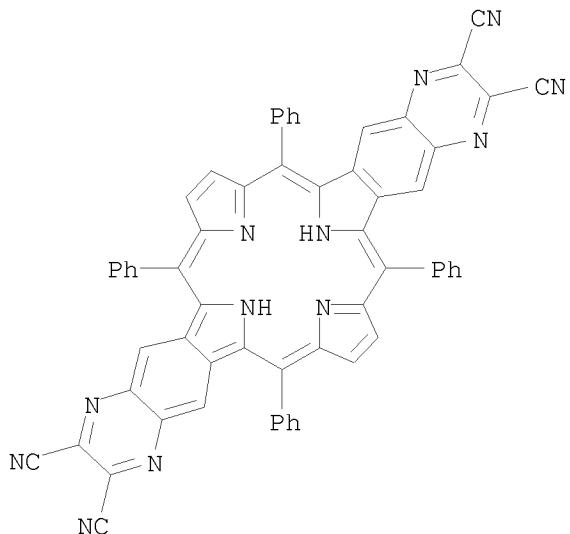


RN 850668-36-9 CAPLUS
CN 5,7[1',2']-Benzeno-25H,27H-quinoxalino[6,7-b]porphine-2,3-dicarbonitrile,
12,17,22-triphenyl- (9CI) (CA INDEX NAME)



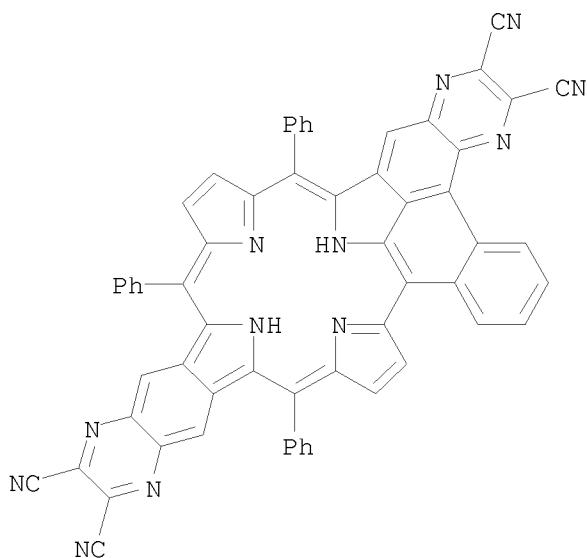
RN 850668-37-0 CAPLUS

CN 29H,31H-Diquinoxalino[6,7-b:6',7'-l]porphine-2,3,16,17-tetracarbonitrile,
7,12,21,26-tetraphenyl- (9CI) (CA INDEX NAME)



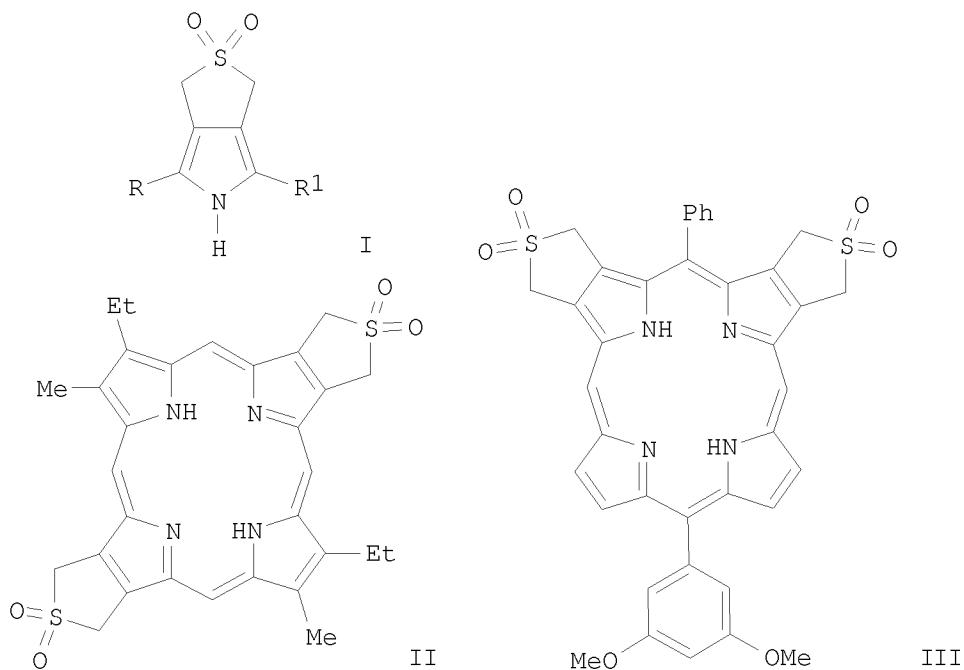
RN 850668-38-1 CAPLUS

CN 5,7[1',2']-Benzeno-29H,31H-diquinoxalino[6,7-b:6',7'-l]porphine-2,3,16,17-
tetracarbonitrile, 12,21,26-triphenyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 21 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:169407 CAPLUS
DOCUMENT NUMBER: 142:411126
TITLE: Sulfolenoporphyrins: synthons for refunctionalization of porphyrins
AUTHOR(S): Lee, Sang Hee; Smith, Kevin M.
CORPORATE SOURCE: Department of Chemistry, Louisiana State University, Baton Rouge, LA, 70803, USA
SOURCE: Tetrahedron Letters (2005), 46(12), 2009-2013
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 142:411126
GI



AB Using sulfolenopyrroles I ($R = H$, $R1 = CO_2CH_2Ph$) and I ($R, R1 = CHO$), methods are developed for the synthesis of opp- (e.g II) and adj- (III) bis-sulfolenoporphyrins. Such compds. are useful building blocks for the refunctionalization of the porphyrin system, and readily undergo Diels-Alder cycloaddn. reactions.

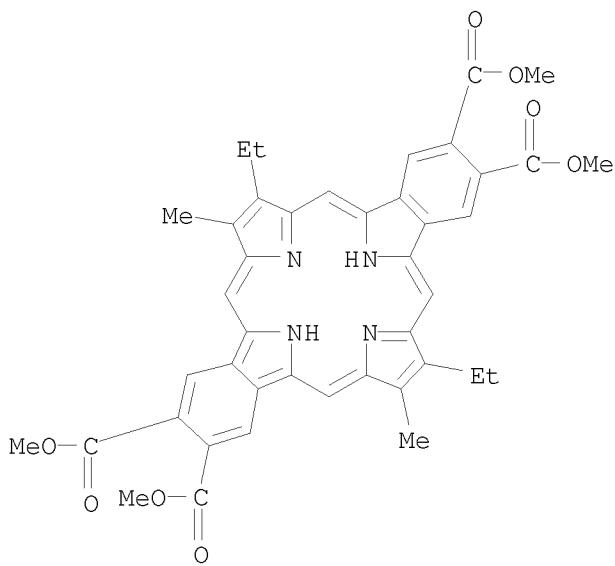
IT 850424-52-1P 850424-54-3P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of sulfolenoporphyrins as synthons for refunctionalization of porphyrins)

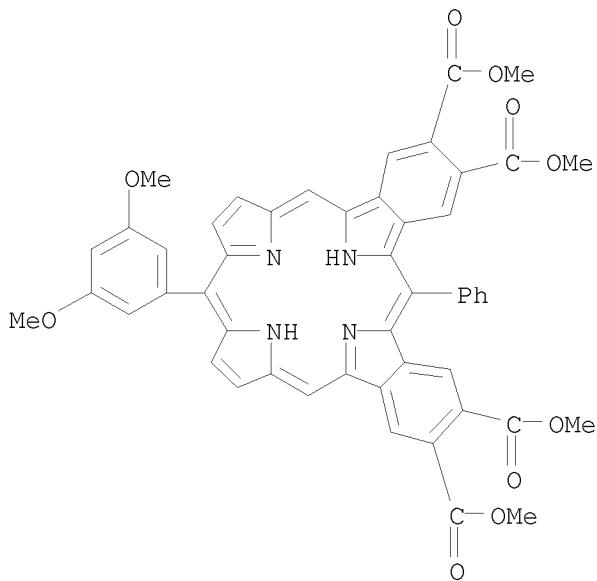
RN 850424-52-1 CAPLUS

CN 25H,27H-Dibenzo[*b,l*]porphine-2,3,14,15-tetracarboxylic acid,
8,21-diethyl-9,20-dimethyl-, tetramethyl ester (9CI) (CA INDEX NAME)



RN 850424-54-3 CAPLUS

CN 25H,27H-Dibenzo[b,g]porphine-2,3,19,20-tetracarboxylic acid,
13-(3,5-dimethoxyphenyl)-23-phenyl-, tetramethyl ester (9CI) (CA INDEX
NAME)



REFERENCE COUNT:

18

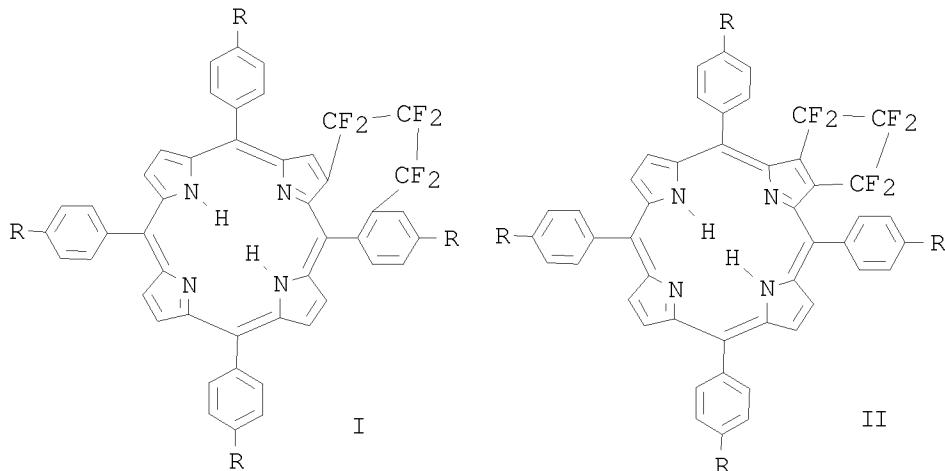
THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 22 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:95693 CAPLUS

DOCUMENT NUMBER: 142:347481

TITLE: Unexpected intramolecular cyclization of
 2-(perfluoroalkyl)tetraarylporphyrin radicals:
 Approaches for the intramolecular cyclization of
 2-(perfluoroalkyl)tetraarylporphyrin radicals
 AUTHOR(S): Zeng, Zhuo; Liu, Chao; Jin, Li-Mei; Guo, Can-Cheng;
 Chen, Qing-Yun
 CORPORATE SOURCE: College of Chemistry and Chemical Engineering, Hunan
 University, Changsha, 410082, Peop. Rep. China
 SOURCE: European Journal of Organic Chemistry (2005), (2),
 306-316
 CODEN: EJOCFK; ISSN: 1434-193X
 PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 142:347481
 GI



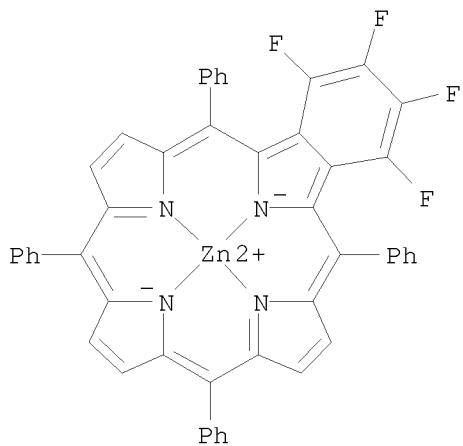
AB β -(Perfluoroalkyl)tetraarylporphyrin radicals, generated by the reaction of I($(CF_2)_nX$ ($n = 2-5$; $X = I, Cl$) with porphyrins in the presence of $Na_2S_2O_4/NaHCO_3$ in $DMSO/CH_2Cl_2$ or $DMSO$, undergo cyclizations at the ortho position of a neighboring Ph ring and/or adjacent pyrrolic unit to give five-, six-, seven-, and eight-membered fused porphyrins, e.g., 5,10,15-triaryl[2-benzohexafluoro(21,22,23)]cyclooctanoporphyrins I and 5,10,15,20-tetraaryl-2-hexafluorocyclopentenylporphyrins II ($R = H, Cl, Me$ for both). Porphyrins I and II could be separated as their zinc complexes, then demetalated. Crystal structures of I ($R = H$), the zinc(II) derivative of II ($R = H$), and of a tetrafluorobenzo analog of the latter zinc complex were determined

IT 848394-57-0P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (preparation and crystal structure of)
RN 848394-57-0 CAPLUS
CN Zinc, [1,2,3,4-tetrafluoro-6,11,16,21-tetr phenyl-23H,25H-
 benzo[b]porphinato(2-)-κN23,κN24,κN25,κN26]-,

(SP-4-1)-, compd. with dichloromethane (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 848394-49-0
CMF C48 H26 F4 N4 Zn
CCI CCS

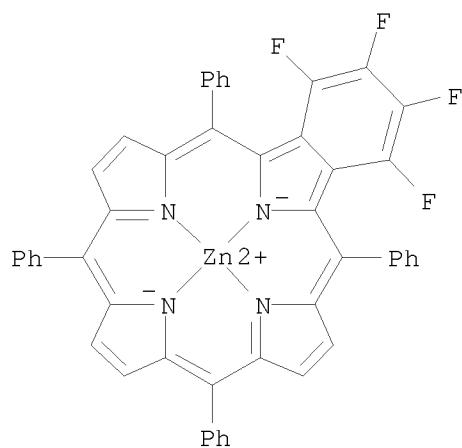


CM 2

CRN 75-09-2
CMF C H2 Cl2

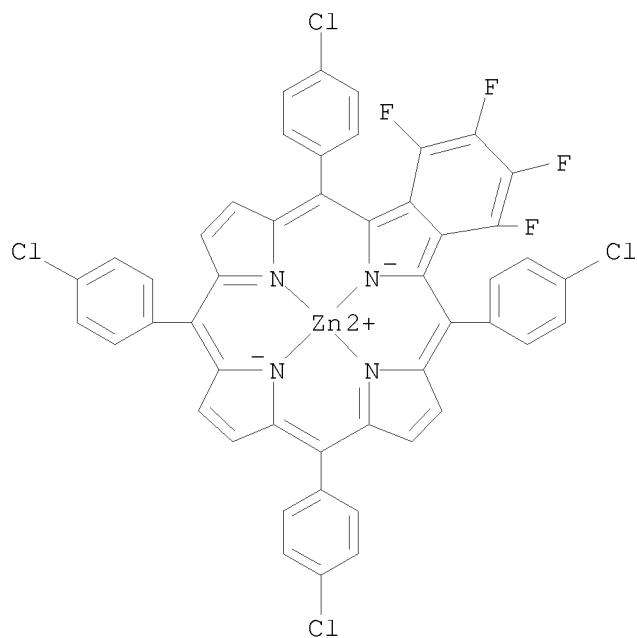
Cl—CH₂—Cl

IT 848394-49-0P 848394-50-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and demetalation of)
RN 848394-49-0 CAPLUS
CN Zinc, [1,2,3,4-tetrafluoro-6,11,16,21-tetr phenyl-23H,25H-
benzo[b]porphinato(2-)—κN23,κN24,κN25,κN26]—,
(SP-4-1)— (CA INDEX NAME)



RN 848394-50-3 CAPLUS

CN Zinc, [6,11,16,21-tetrakis(4-chlorophenyl)-1,2,3,4-tetrafluoro-23H,25H-benzo[b]porphinato(2-) -κN23,κN24,κN25,κN26]-,
(SP-4-1)- (9CI) (CA INDEX NAME)

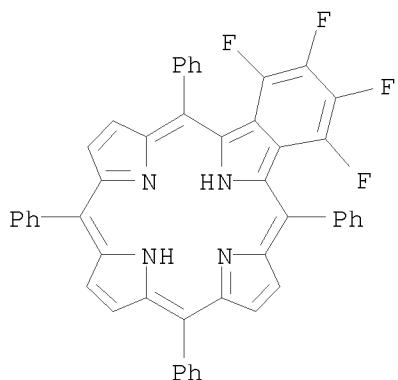


IT 848394-52-5P 848394-53-6P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

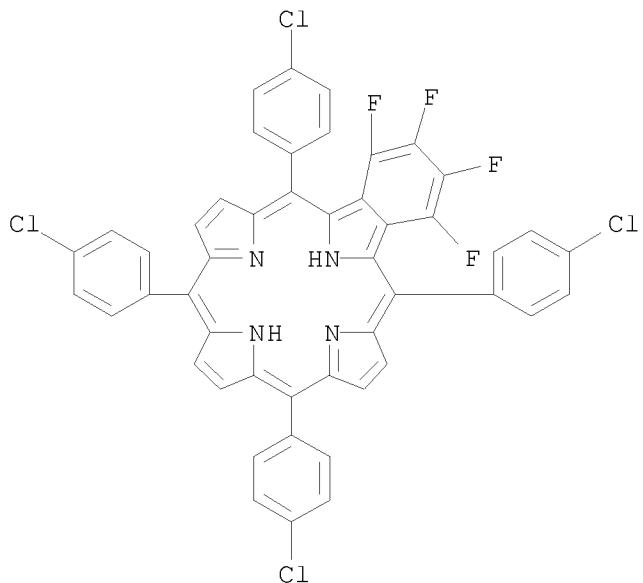
RN 848394-52-5 CAPLUS

CN 23H,25H-Benzo[b]porphine, 1,2,3,4-tetrafluoro-6,11,16,21-tetraphenyl- (CA INDEX NAME)



RN 848394-53-6 CAPLUS

CN 23H,25H-Benzo[b]porphine, 6,11,16,21-tetrakis(4-chlorophenyl)-1,2,3,4-tetrafluoro- (9CI) (CA INDEX NAME)



REFERENCE COUNT:

46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 23 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:48617 CAPLUS

DOCUMENT NUMBER: 142:282431

TITLE: Characterization of Petroporphyrins Using Ultraviolet-Visible Spectroscopy and Laser Desorption Ionization Time-of-Flight Mass Spectrometry

AUTHOR(S): Xu, Hai; Que, Guohe; Yu, Daoyong; Lu, Jian R.

CORPORATE SOURCE: State Key Laboratory of Heavy Oil Processing, College of Chemistry and Chemical Engineering, University of Petroleum, Dongying, 257061, Peop. Rep. China

SOURCE: Energy & Fuels (2005), 19(2), 517-524

CODEN: ENFUEM; ISSN: 0887-0624

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Petroporphyrins were extracted from two typical Chinese heavy crude oils, Tahe and Du84, and then purified by silica gel chromatog., followed by demetallization by Me sulfonic acid. The extraction and purification were monitored

using UV-visible spectroscopy, and the final petroporphyrins were analyzed using laser desorption ionization time-of-flight mass spectrometry. The soft ionization mass spectrometric technique proved to be effective for the characterization of petroporphyrins. The results show that, in Tahe crude oil, vanadium is more abundant than nickel and 75% of the vanadyl porphyrins are of the etioporphyrin (ETIO) type, with remaining fractions attributed to deoxophylloerythroetioporphyrin (DPEP) and benzo types. The Σ DPEP/ Σ ETIO ratio was found to be 0.18. In contrast, the Du84 heavy crude oil contains more abundant nickel than vanadium, with its nickel porphyrins comprising mainly DPEP and ETIO types, with each occupying 45%, and the tetrahydrobenzo-DPEP and benzo types attributed to the remaining 10%. The Σ DPEP/ Σ ETIO ratio is .apprx.1.1. These results suggest that the Tahe crude oil has higher thermal maturity than the Du84 crude oil, and the former is in its mature stage, whereas the latter is in its evolution stage.

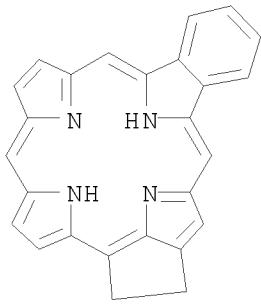
IT 128920-36-5D, derivs., vanadyl and nickel complexes
844635-65-0D, derivs., nickel complexes

RL: ANT (Analyte); OCU (Occurrence, unclassified); ANST (Analytical study); OCCU (Occurrence)

(characterization of petroporphyrins using UV-visible spectroscopy and laser desorption ionization time-of-flight mass spectrometry)

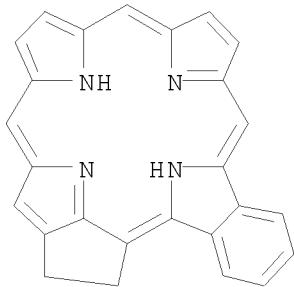
RN 128920-36-5 CAPLUS

CN 5,22:12,15-Diimino-20,18-metheno-7,10-nitrilobenzo[*o*]cyclopent[*b*]azacyclononadecine, 16,17-dihydro- (9CI) (CA INDEX NAME)



RN 844635-65-0 CAPLUS

CN 7,10:17,22-Diimino-5,3-metheno-12,15-nitrilobenzo[e]cyclopent[b]azacyclononadecine, 1,2-dihydro- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 24 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:3712 CAPLUS
DOCUMENT NUMBER: 142:308595
TITLE: Synthesis of Isomeric Angularly Annealed Dinaphthoporphyrin Systems: Examination of the Relative Positioning and Orientation of Ring Fusion as Factors Influencing the Porphyrin Chromophore
Manley, Jerad M.; Roper, Tracy J.; Lash, Timothy D.
Department of Chemistry, Illinois State University,
Normal, IL, 61790-4160, USA
Journal of Organic Chemistry (2005), 70(3), 874-891
CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 142:308595
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Porphyrins built up from two naphtho[1,2-c]pyrrole subunits and two β -substituted pyrroles can produce five isomeric dinaphthoporphyrin systems. To gain insights into the effects of ring fusion on extended porphyrin chromophores, all five of these systems, I-V derivs., were synthesized in isomerically pure form. In four of these syntheses, dihydronaphthopyrroles were used to introduce one or both of the naphthalene subunits, and dehydrogenation with DDQ in refluxing toluene later produced the fully conjugated systems. Naphthopyrroles were also prepared by reacting isocyanoacetate esters with 1-nitronaphthalene in the presence of a phosphazene base. These compds. proved to be less stable than their dihydronaphthopyrrolic counterparts, but could still be used in these synthetic studies. Three isomeric adj-dinaphthoporphyrin systems were prepared using the MacDonald 2 + 2 condensation or by the cyclization of a,c-biladiene intermediates with CuCl₂ or AgIO₃-Zn(OAc)₂. A dinaphthoporphyrin with two naphthalene units pointing toward one another could only be obtained in low yields due to a combination of stability and steric factors, but the other two adj-di-fused systems were isolated in good overall yields. However, the final dehydrogenation step occurred in

moderate yields (50–60%) and could only be performed when the porphyrins bore propionate ester side chains that produced sufficient solubility in organic

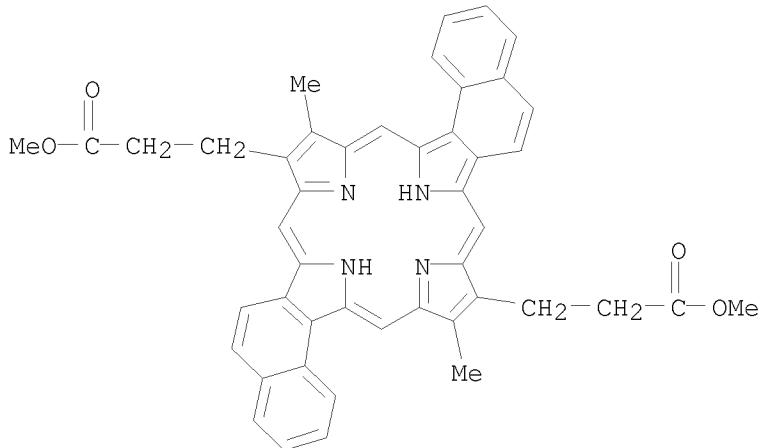
solvents. The two related opp-dinaphthoporphyrins were synthesized by a head-to-tail self-condensation of a dipyrromethane aldehyde, or a 3 + 1 synthesis using a tripyrane intermediate bearing two fused dihydronaphthalene moieties, in excellent yields. In both cases, a final dehydrogenation step was required, but the opp-dinaphthoporphyrins were consistently formed in virtually quant. yields. The opp-dinaphthoporphyrin series gave UV-visible spectra with relatively strong Soret bands at 425 nm, and the visible region was dominated by an unusually strong Q-band III. The adj-dinaphthoporphyrins produced broader less intense Soret bands and four well-defined Q-bands, including a relatively strong absorption at 645 nm. However, the relative orientation of the naphthalene rings had no significant effects on these spectra. The dications produced in TFA-CHCl₃ solns. showed more discrimination between the individual porphyrin systems, and the metallo derivs. also displayed significant variations in their electronic absorption spectra.

IT 159469-67-7P 845784-90-9P 845784-91-0P
 845784-92-1P 845784-93-2P 845784-94-3P
 845784-95-4P 845785-00-4P 845785-01-5P
 845785-02-6P 845785-10-6P 845785-11-7P
 845785-12-8P 845785-18-4P 845785-19-5P
 845785-20-8P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (preparation and effect of ring fusion position/orientation on UV-visible of
 porphyrin chromophore)

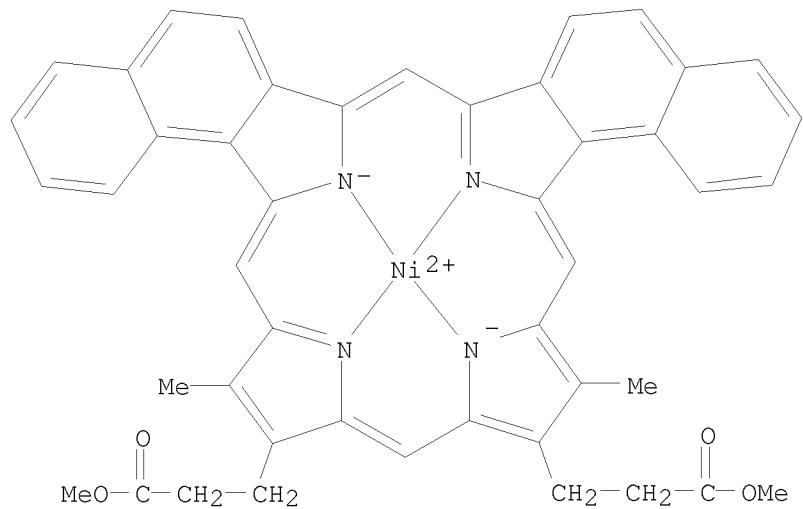
RN 159469-67-7 CAPLUS

CN 29H,31H-Dinaphtho[1,2-b:1',2'-l]porphine-10,24-dipropanoic acid,
 11,25-dimethyl-, dimethyl ester (9CI) (CA INDEX NAME)



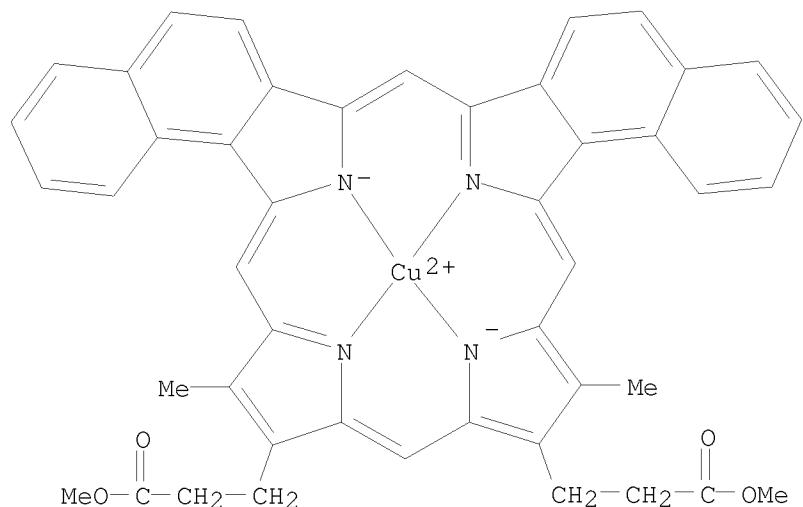
RN 845784-90-9 CAPLUS

CN Nickel, [dimethyl 19,25-dimethyl-29H,31H-dinaphtho[1,2-b:2',1'-g]porphine-20,24-dipropanoato(2-)-κN29,κN30,κN31,κN32]-,
 (SP-4-2)- (9CI) (CA INDEX NAME)



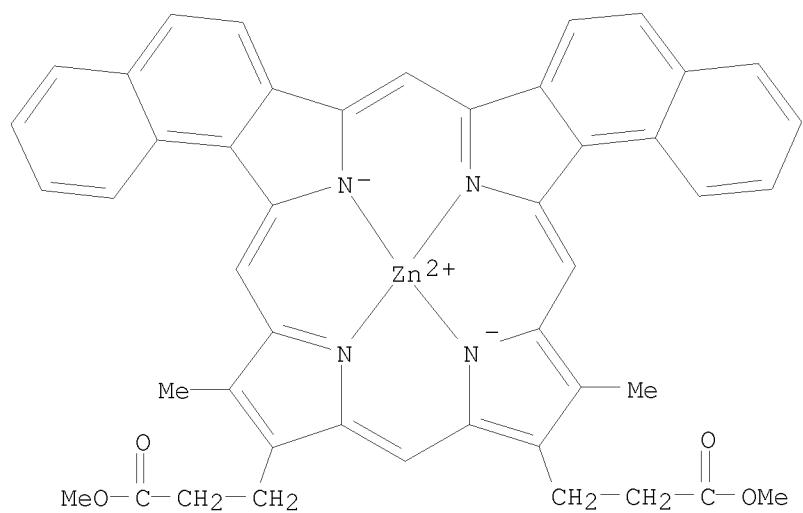
RN 845784-91-0 CAPLUS

CN Copper, [dimethyl 19,25-dimethyl-29H,31H-dinaphtho[1,2-b:2',1'-g]porphine-20,24-dipropanoato(2-)-κN29,κN30,κN31,κN32]-,
(SP-4-2)- (9CI) (CA INDEX NAME)



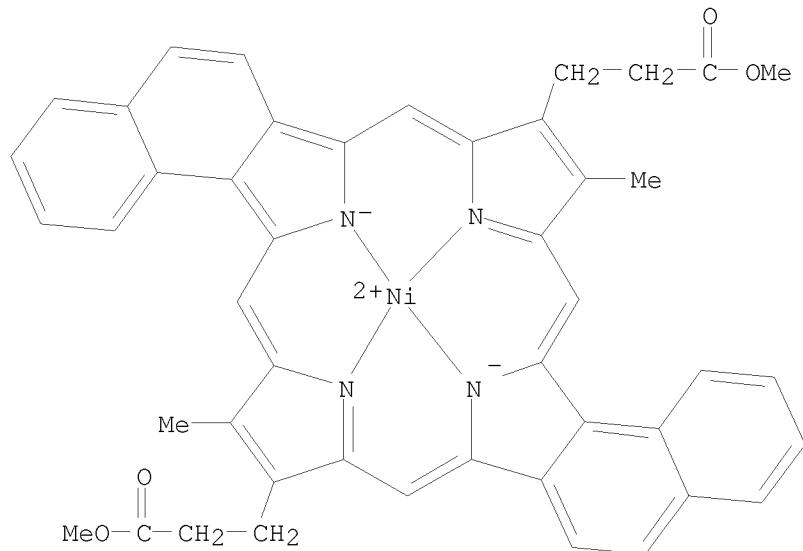
RN 845784-92-1 CAPLUS

CN Zinc, [dimethyl 19,25-dimethyl-29H,31H-dinaphtho[1,2-b:2',1'-g]porphine-20,24-dipropanoato(2-)-κN29,κN30,κN31,κN32]-,
(SP-4-2)- (9CI) (CA INDEX NAME)



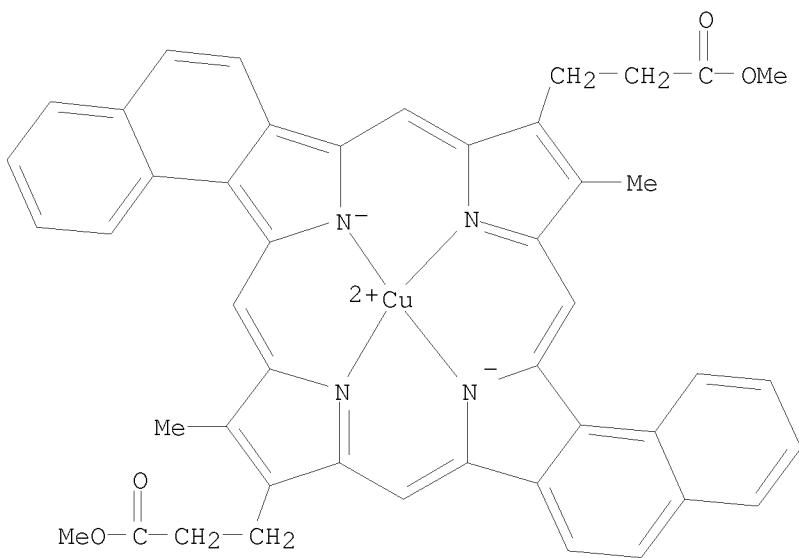
RN 845784-93-2 CAPLUS

CN Nickel, [dimethyl 11,25-dimethyl-29H,31H-dinaphtho[1,2-b:1',2'-l]porphine-10,24-dipropanoato(2-)-κN29,κN30,κN31,κN32]-,
(SP-4-1)- (9CI) (CA INDEX NAME)



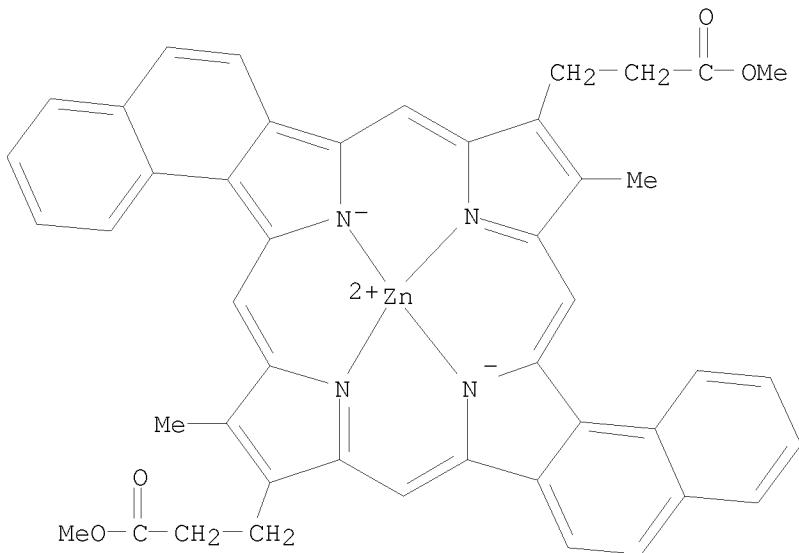
RN 845784-94-3 CAPLUS

CN Copper, [dimethyl 11,25-dimethyl-29H,31H-dinaphtho[1,2-b:1',2'-l]porphine-10,24-dipropanoato(2-)-κN29,κN30,κN31,κN32]-,
(SP-4-1)- (9CI) (CA INDEX NAME)



RN 845784-95-4 CAPLUS

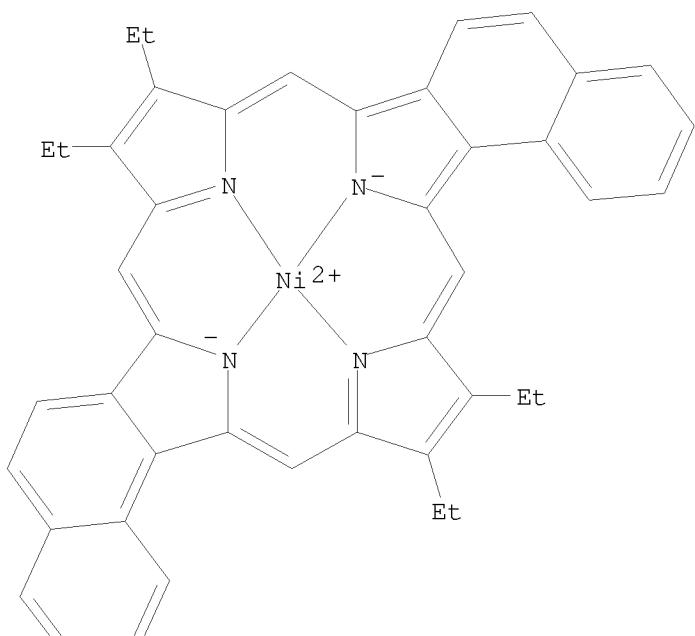
CN Zinc, [dimethyl 11,25-dimethyl-29H,31H-dinaphtho[1,2-b:1',2'-l]porphine-10,24-dipropanoato(2-)-κN29,κN30,κN31,κN32]-,
(SP-4-1)- (9CI) (CA INDEX NAME)



RN 845785-00-4 CAPLUS

CN Nickel, [10,11,24,25-tetraethyl-29H,31H-dinaphtho[1,2-b:1',2'-l]porphinato(2-)-κN29,κN30,κN31,κN32]-, (SP-4-2)-(9CI) (CA INDEX NAME)

PAGE 1-A

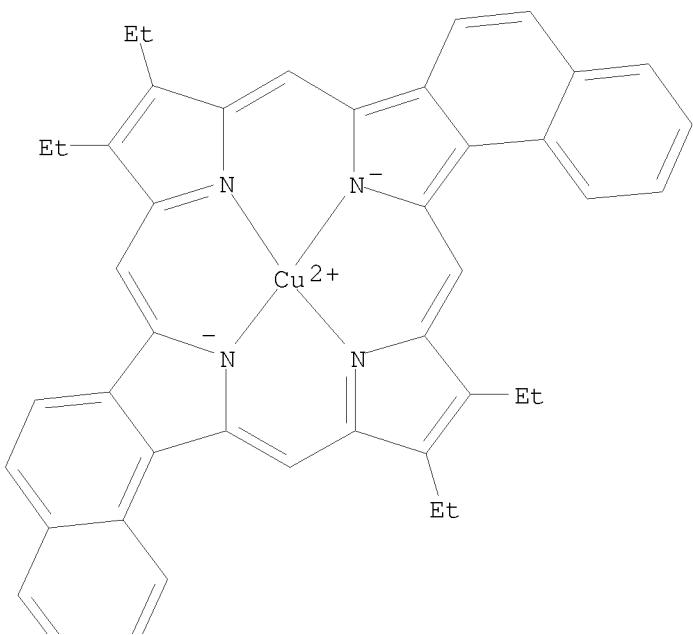


PAGE 2-A



RN 845785-01-5 CAPLUS
CN Copper, [10,11,24,25-tetraethyl-29H,31H-dinaphtho[1,2-b:1',2'-l]porphinato(2-)-
 κ N29, κ N30, κ N31, κ N32]-, (SP-4-2)-
(9CI) (CA INDEX NAME)

PAGE 1-A

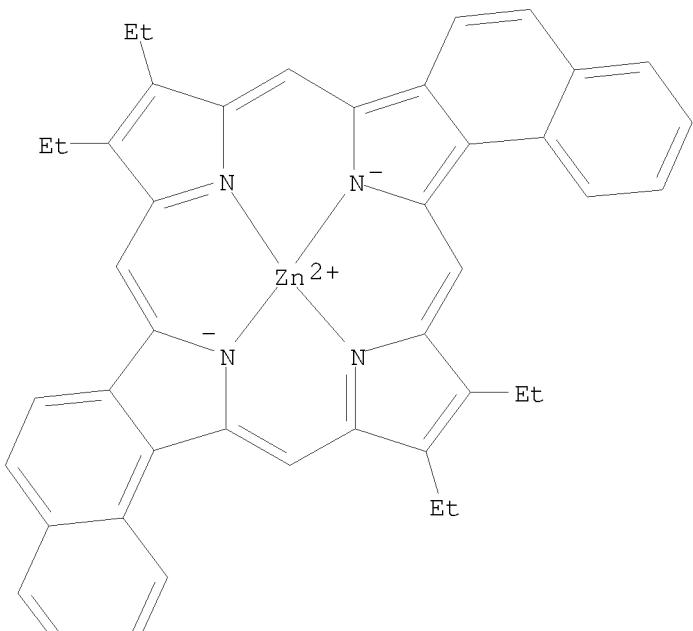


PAGE 2-A



RN 845785-02-6 CAPLUS
CN Zinc, [10,11,24,25-tetraethyl-29H,31H-dinaphtho[1,2-b:1',2'-l]porphinato(2-)-κN29,κN30,κN31,κN32]-, (SP-4-2)- (9CI) (CA INDEX NAME)

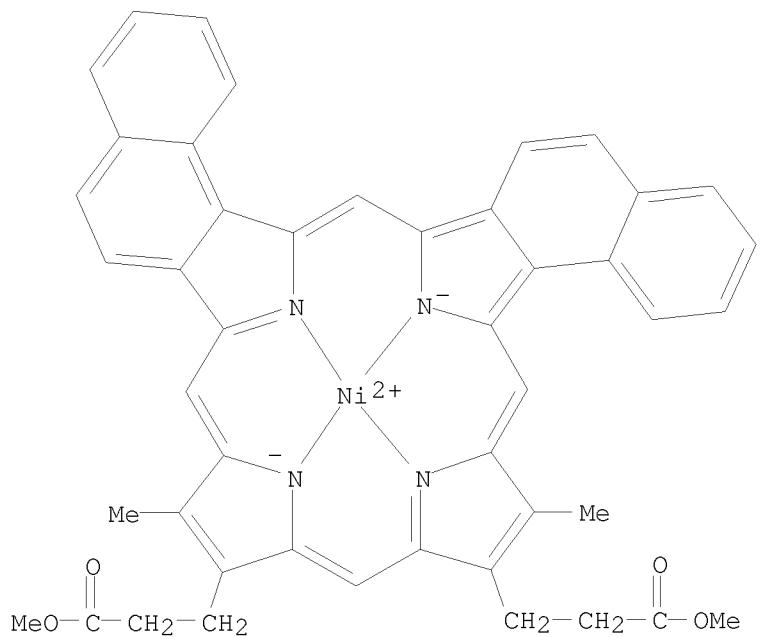
PAGE 1-A



PAGE 2-A

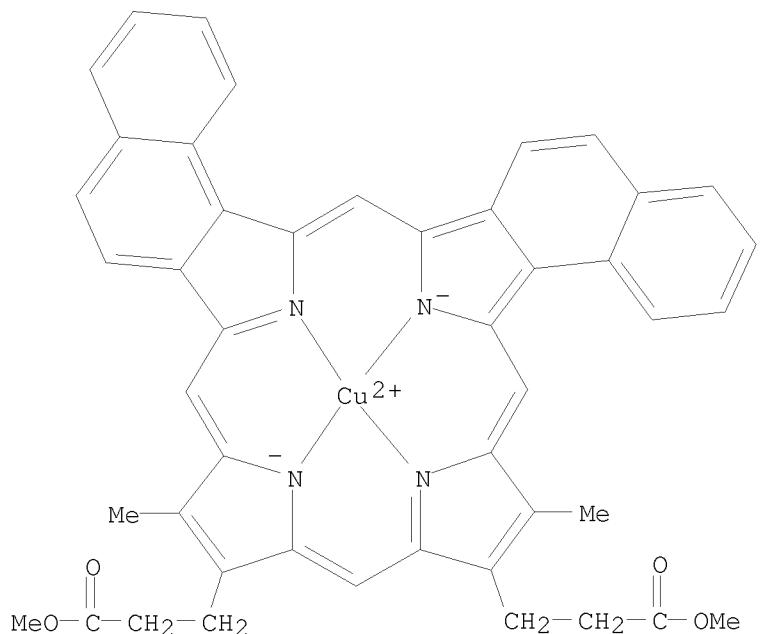


RN 845785-10-6 CAPLUS
CN Nickel, [dimethyl 8,14-dimethyl-29H,31H-dinaphtho[1,2-b:1',2'-g]porphine-9,13-dipropanoato(2-)–κN29,κN30,κN31,κN32]–,
(SP-4-2)– (9CI) (CA INDEX NAME)



RN 845785-11-7 CAPLUS

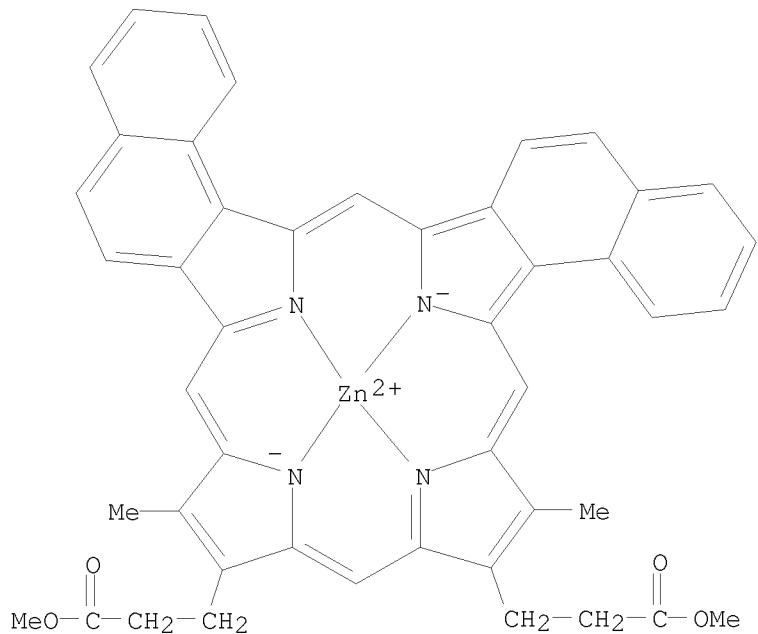
CN Copper, [dimethyl 8,14-dimethyl-29H,31H-dinaphtho[1,2-b:1',2'-g]porphine-9,13-dipropanoato(2-)– $\kappa\text{N}29,\kappa\text{N}30,\kappa\text{N}31,\kappa\text{N}32$]–,
(SP-4-2)– (9CI) (CA INDEX NAME)



RN 845785-12-8 CAPLUS

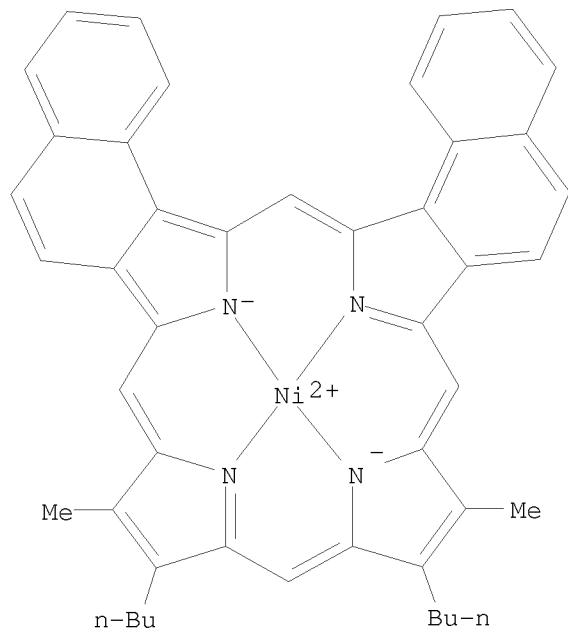
CN Zinc, [dimethyl 8,14-dimethyl-29H,31H-dinaphtho[1,2-b:1',2'-g]porphine-

9,13-dipropanoato(2-)–κN29,κN30,κN31,κN32]–,
(SP-4-2)– (9CI) (CA INDEX NAME)

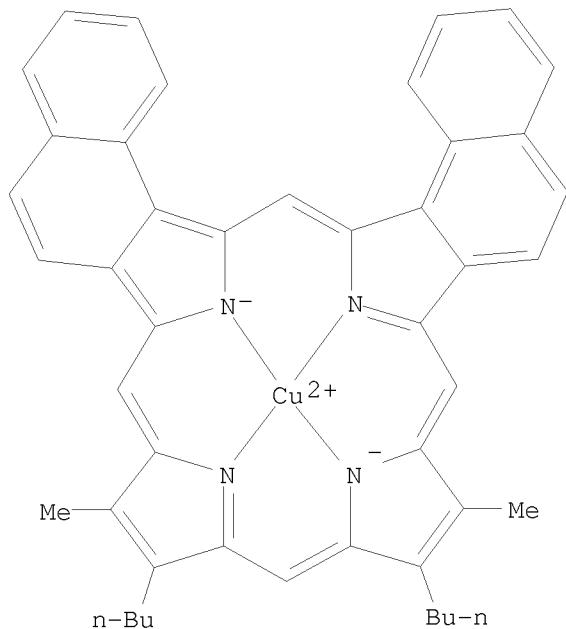


RN 845785-18-4 CAPLUS

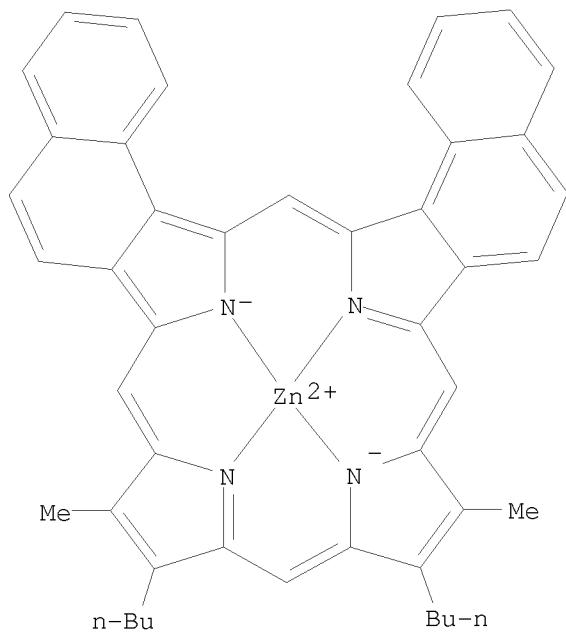
CN Nickel, [11,15-dibutyl-10,16-dimethyl-29H,31H-dinaphtho[2,1-b:1',2'-g]porphinato(2-)–κN29,κN30,κN31,κN32]–, (SP-4-2)– (9CI) (CA INDEX NAME)



RN 845785-19-5 CAPLUS
CN Copper, [11,15-dibutyl-10,16-dimethyl-29H,31H-dinaphtho[2,1-b:1',2'-g]porphinato(2-)–κN29,κN30,κN31,κN32]–, (SP-4-2)–
(9CI) (CA INDEX NAME)



RN 845785-20-8 CAPLUS
CN Zinc, [11,15-dibutyl-10,16-dimethyl-29H,31H-dinaphtho[2,1-b:1',2'-g]porphinato(2-)–κN29,κN30,κN31,κN32]–, (SP-4-2)–
(9CI) (CA INDEX NAME)

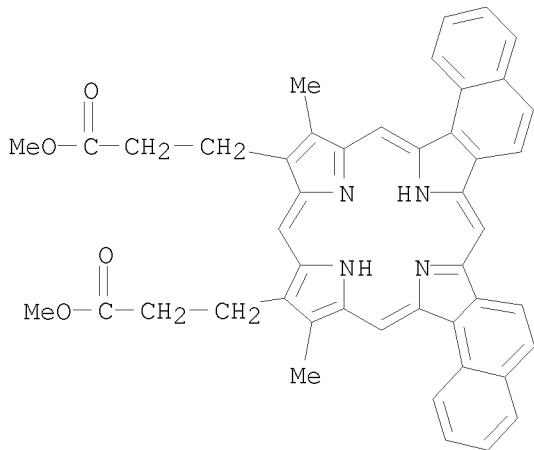


IT 159469-60-0P 845784-99-8P 845785-09-3P
845785-14-0P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation, metalaⁿtion, and effect of ring fusion position/orientation on UV-visible of porphyrin chromophore)

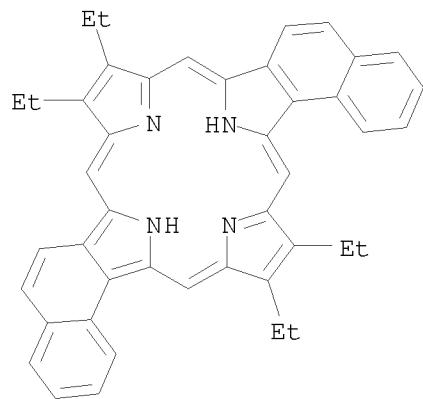
RN 159469-60-0 CAPLUS

CN 29H,31H-Dinaphtho[1,2-b:2',1'-g]porphine-20,24-dipropanoic acid,
19,25-dimethyl-, dimethyl ester (9CI) (CA INDEX NAME)



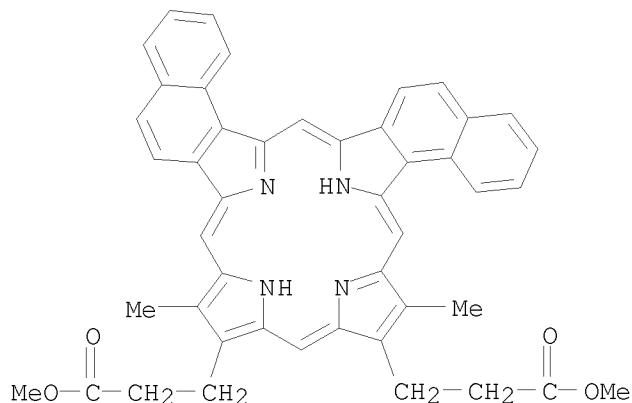
RN 845784-99-8 CAPLUS

CN 29H,31H-Dinaphtho[1,2-b:2',1'-l]porphine, 10,11,24,25-tetraethyl- (9CI)
(CA INDEX NAME)



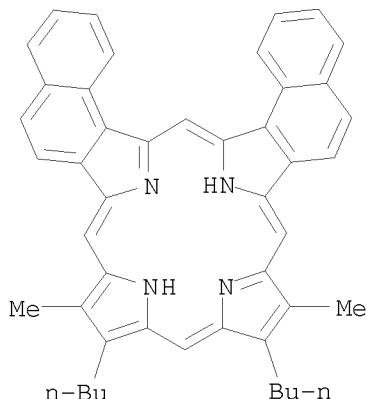
RN 845785-09-3 CAPLUS

CN 29H,31H-Dinaphtho[1,2-b:1',2'-g]porphine-9,11-dipropanoic acid,
8,14-dimethyl-, dimethyl ester (9CI) (CA INDEX NAME)



RN 845785-14-0 CAPLUS

CN 29H,31H-Dinaphtho[2,1-b:1',2'-g]porphine, 11,13-dibutyl-10,15-dimethyl-
(9CI) (CA INDEX NAME)



REFERENCE COUNT: 102 THERE ARE 102 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

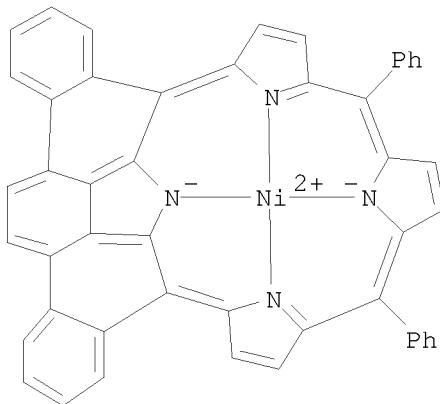
L9 ANSWER 25 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2004:1106815 CAPLUS
 DOCUMENT NUMBER: 142:231810
 TITLE: Controlling Both Ground- and Excited-State Thermal Barriers to Bergman Cyclization with Alkyne Termini Substitution
 AUTHOR(S): Nath, Mahendra; Pink, Maren; Zaleski, Jeffrey M.
 CORPORATE SOURCE: Department of Chemistry, Indiana University, Bloomington, IN, 47405, USA
 SOURCE: Journal of the American Chemical Society (2005), 127(2), 478-479
 CODEN: JACSAT; ISSN: 0002-7863
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 142:231810
 AB The cross-coupling reaction of 2,3-dibromo-5,10,15,20-tetraphenylporphyrin with corresponding organostannanes in the presence of a Pd0 catalyst in THF at reflux temperature yields free base 2,3-dialkynylporphyrins 1a,c-e. The subsequent deprotection of trimethylsilyl group of 1a with TBAF in THF under aqueous conditions produces the 2,3-diethynyl-5,10,15,20-tetraphenylporphyrin 1b in 87% yield. Compds. 1a-d undergo Zn insertion upon treatment with Zn(OAc)₂·2H₂O in CHCl₃/MeOH to give Zn(II) 2,3-dialkynyl-5,10,15,20-tetraphenylporphyrins (2a-d) in 70-92% yields. Thermal Bergman cyclization of 1a-e and 2a-d was studied in chlorobenzene and .apprx.35-fold 1,4-cyclohexadiene at 120-210°. 1B and 2b (R = H) react at lower temperature (120°) and produce cyclized products 3b and 4b in higher yields (65-70%) than their Pr, iso-Pr, and Ph analogs, with R = Ph being the most stable. Continuing in this trend, the -TMS derivs. 1a and 2a exhibit no reactivity even after heating at 190° in chlorobenzene/cyclohexadiene for 24 h. Photolysis (at $\lambda \geq$ 395 nm) of 1b and 2b at 10° leads the formation of isolable picenoporphyrin products in 15 and 35% yields, resp., in 72 h, whereas these compds. are stable in solution under same reaction conditions at 25° in the dark. Unlike thermolysis at 125°, which did not yield Bergman cyclized product for R = Ph, photolysis generated very small

amts. of picenoporphyrin products (3c: 5%; 4c: 8% based on ¹H NMR) as well as a mixture of reduced porphyrin products that were not separable. Thus, trends in the barrier to Bergman cyclization in the excited state exhibit the same trend as those observed in the ground state as a function of R-group. Finally, photolysis of 2b at 10° with $\lambda \geq$ 515 or 590 nm in benzene/iProH (4:1, 72 h) produces 4b in 15 and 6% isolated yields, indicating that conjugation of the enediyne unit into the porphyrin electronic transitions leads to sufficient distortion to generate photoproduct even with long wavelength excitation.

IT 380447-58-5P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and crystal structure)

RN 380447-58-5 CAPLUS

CN Nickel, [11,16-diphenyl-1,21[1',2']:4,6[1'',2'']-dibenzeno-23H,25H-benzo[b]porphinato(2-) -κN₂₃,κN₂₄,κN₂₅,κN₂₆] -,
(SP-4-1)- (9CI) (CA INDEX NAME)

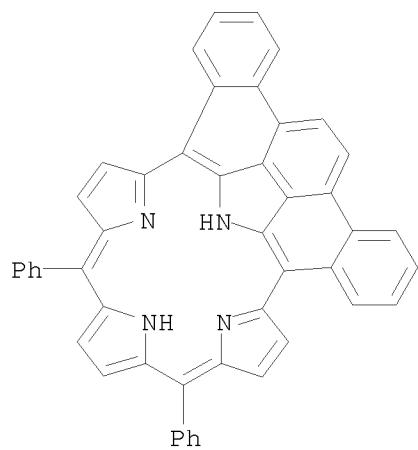
IT 564475-27-0P 842125-59-1P 842125-60-4P

842125-61-5P 842125-62-6P 842125-63-7P

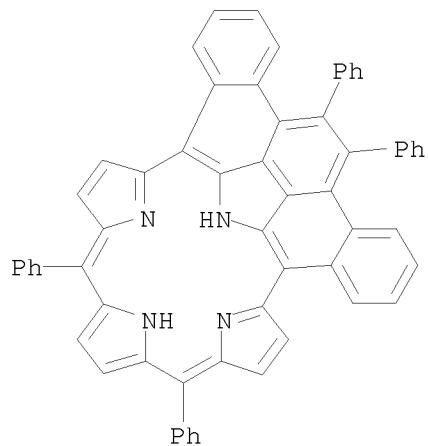
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 564475-27-0 CAPLUS

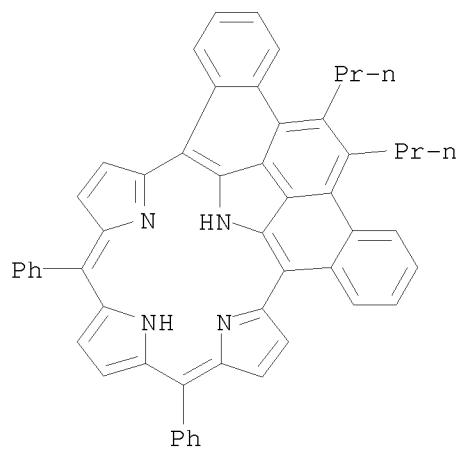
CN 1,21[1',2']:4,6[1'',2'']-Dibenzeno-23H,25H-benzo[b]porphine,
11,16-diphenyl- (9CI) (CA INDEX NAME)



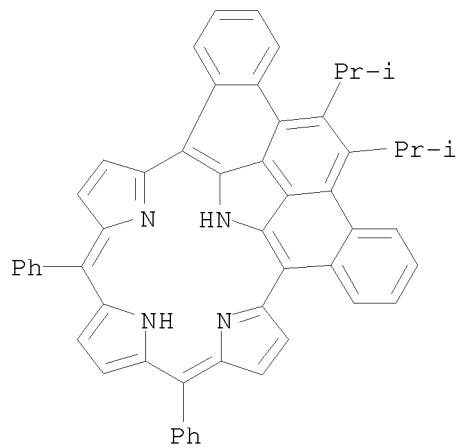
RN 842125-59-1 CAPLUS
CN 1,21[1',2']:4,6[1'',2'']-Dibenzeno-23H,25H-benzo[b]porphine,
2,3,11,16-tetraphenyl- (9CI) (CA INDEX NAME)



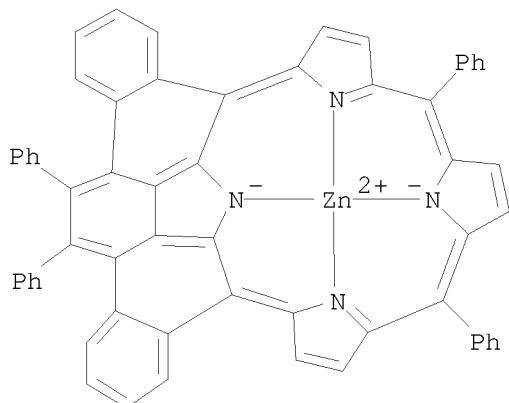
RN 842125-60-4 CAPLUS
CN 1,21[1',2']:4,6[1'',2'']-Dibenzeno-23H,25H-benzo[b]porphine,
11,16-diphenyl-2,3-dipropyl- (9CI) (CA INDEX NAME)



RN 842125-61-5 CAPLUS
CN 1,21[1',2']:4,6[1'',2'']-Dibenzeno-23H,25H-benzo[b]porphine,
2,3-bis(1-methylethyl)-11,16-diphenyl- (9CI) (CA INDEX NAME)

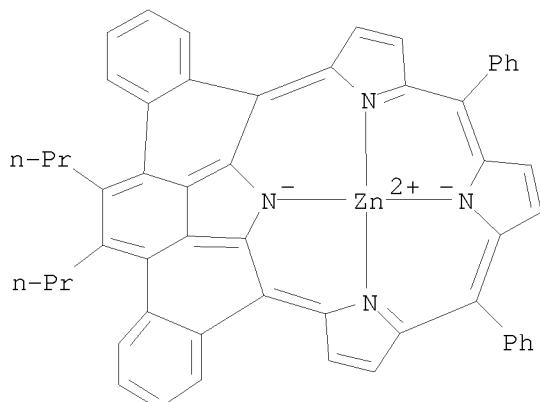


RN 842125-62-6 CAPLUS
CN Zinc, [2,3,11,16-tetraphenyl-1,21[1',2']:4,6[1'',2'']-dibenzeno-23H,25H-
benzo[b]porphinato(2-)–κN23,κN24,κN25,κN26]–,
(SP-4-1)– (9CI) (CA INDEX NAME)



RN 842125-63-7 CAPLUS

CN Zinc, [11,16-diphenyl-2,3-dipropyl-1,21[1',2']:4,6[1'',2'']-dibenzo-23H,25H-benzo[b]porphinato(2-)-κN23,κN24,κN25,κN26]-, (SP-4-1)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 26 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:985736 CAPLUS

DOCUMENT NUMBER: 142:463488

TITLE: The Photodynamic Therapy (PDT) Anticancer Activity of a Range of Porphyrin Dimers and Related Compounds Derived from Hematoporphyrin

AUTHOR(S): Byrne, Christopher J.; Cooper, Mathew A.; Cowled, Prudence A.; Johnstone, Robert A. W.; Mackenzie, Lorraine; Marshallsay, Lorely V.; Morris, Ian K.; Muldoon, Craig A.; Raftery, Mark J.; Yin, Sek Sau; Ward, A. David

CORPORATE SOURCE: Department of Chemistry, University of Adelaide, Adelaide, SA 5005, Australia

SOURCE: Australian Journal of Chemistry (2004), 57(11),

1091-1102
CODEN: AJCHAS; ISSN: 0004-9425

PUBLISHER: CSIRO Publishing
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 142:463488

AB The synthesis of diporphyrins and analogous compds. related to those present in the oligomeric fraction (Photofrin II) obtained from hematoporphyrin derivative (HPD) is described. The photodynamic activity of these compds., *in vivo*, varies from inactive to as active as Photofrin II. Factors that are important in determining this anticancer activity of the synthetic compds. are the presence of hydrophobic side chains, as well as the propionic acid side chains of the hematoporphyrin derived materials, and the nature of the linking group between the porphyrins.

IT 851440-70-5P

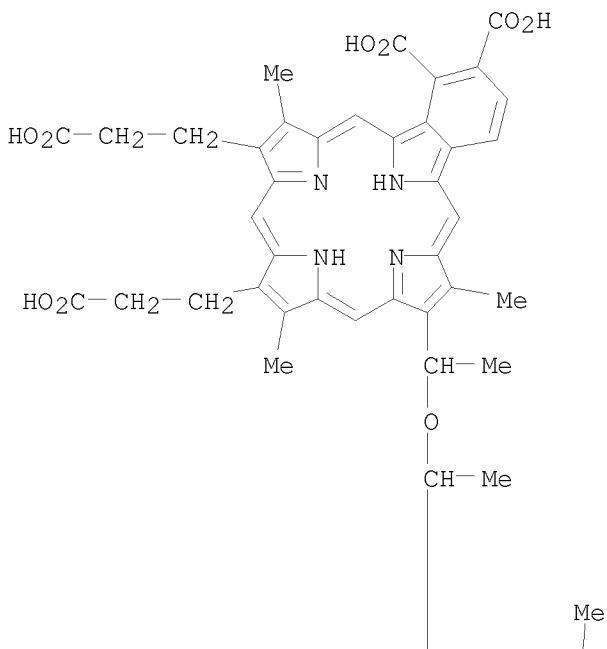
RL: PAC (Pharmacological activity); PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(photodynamic therapy (PDT) anticancer activity of porphyrin dimers and related compds. derived from hematoporphyrin)

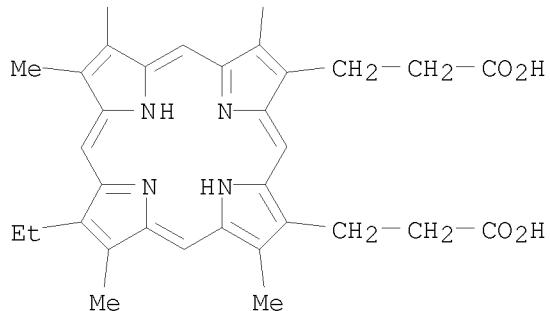
RN 851440-70-5 CAPLUS

CN 23H,25H-Benzo[b]porphine-9,13-dipropanoic acid,
18-[1-[1-[13,17-bis(2-carboxyethyl)-7-ethyl-3,8,12,18-tetramethyl-21H,23H-porphin-2-yl]ethoxy]ethyl]-3,4-dicarboxy-8,14,19-trimethyl- (9CI) (CA INDEX NAME)

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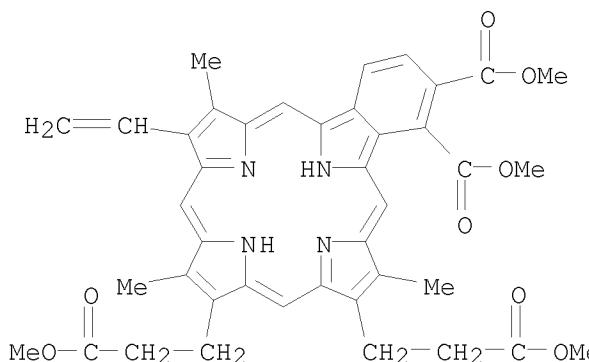


IT 94238-26-3

RL: RCT (Reactant); RACT (Reactant or reagent)
 (photodynamic therapy (PDT) anticancer activity of porphyrin dimers and
 related compds. derived from hematoporphyrin)

RN 94238-26-3 CAPLUS

CN 23H,25H-Benzo[b]porphine-9,13-dipropionic acid,
 18-ethenyl-3,4-bis(methoxycarbonyl)-8,14,19-trimethyl-, dimethyl ester
 (9CI) (CA INDEX NAME)



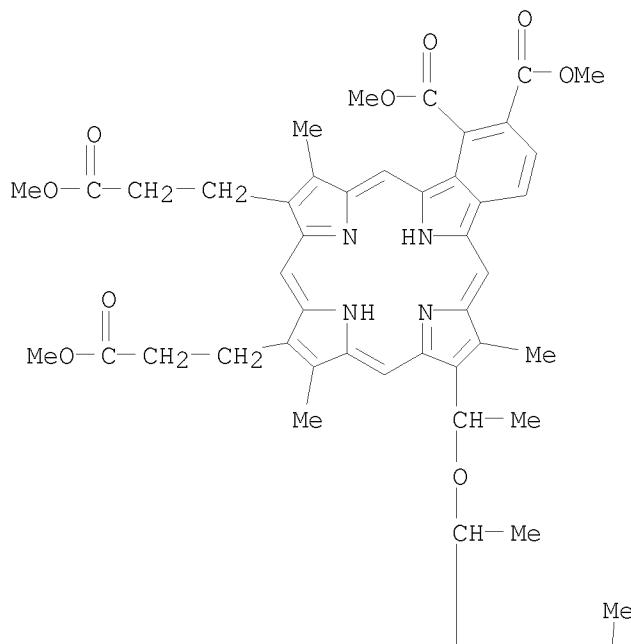
IT 851441-31-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (photodynamic therapy (PDT) anticancer activity of porphyrin dimers and
 related compds. derived from hematoporphyrin)

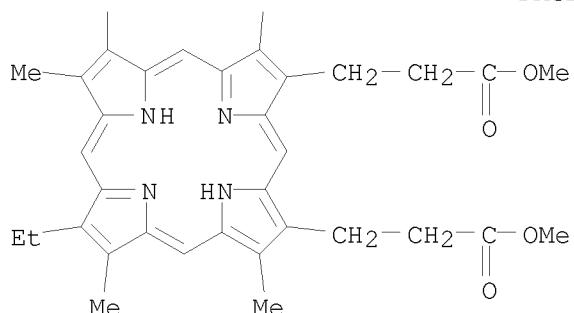
RN 851441-31-1 CAPLUS

CN 23H,25H-Benzo[b]porphine-9,13-dipropionic acid,
 18-[1-[1-[7-ethyl-13,17-bis(3-methoxy-3-oxopropyl)-3,8,12,18-tetramethyl-
 21H,23H-porphin-2-yl]ethoxy]ethyl]-3,4-bis(methoxycarbonyl)-8,14,19-
 trimethyl-, dimethyl ester (9CI) (CA INDEX NAME)

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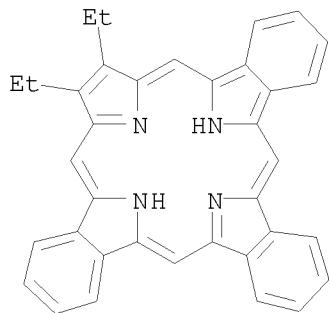
REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 27 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2004:498386 CAPLUS
 DOCUMENT NUMBER: 141:190619
 TITLE: An efficient synthesis of conjugation-expanded carba-
 and azuliporphyrins using a
 bicyclo[2.2.2]octadiene-fused tripyrrane
 AUTHOR(S): Okujima, Tetsuo; Komobuchi, Naoki; Shimizu, Yusuke;
 Uno, Hidemitsu; Ono, Noboru
 CORPORATE SOURCE: Department of Fundamental Science, Faculty of Science,
 Ehime University, Matsuyama, 790-8577, Japan

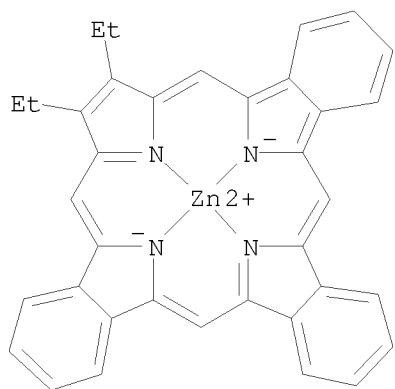
SOURCE: Tetrahedron Letters (2004), 45(28), 5461-5464
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 141:190619
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Bicyclo[2.2.2]octadiene-fused tripyrrane I was synthesized as a first versatile reagent for the preparation of π -expanded heteroporphyrins. The reaction of the tripyrrane with 1,3-diformylindene and azulene-1,3-dicarbaldehyde afforded the corresponding heteroporphyrins, e.g. II, which were easily converted into tetrabenzo carbaporphyrin and tribenzoazuliporphyrin by retro Diels-Alder reaction.
IT 736181-67-2P 737766-06-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(efficient synthesis of conjugation-expanded carba- and azuliporphyrins using a bicyclo[2.2.2]octadiene-fused tripyrrane)
RN 736181-67-2 CAPLUS
CN 27H,29H-Tribenzo[b,g,l]porphine, 22,23-diethyl- (9CI) (CA INDEX NAME)

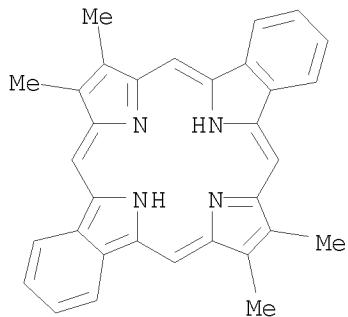


RN 737766-06-2 CAPLUS
CN Zinc, [7,8-diethyl-21H,23H-porphinato(2-)-
 κ N21, κ N22, κ N23, κ N24]-, (SP-4-2)- (9CI) (CA INDEX NAME)



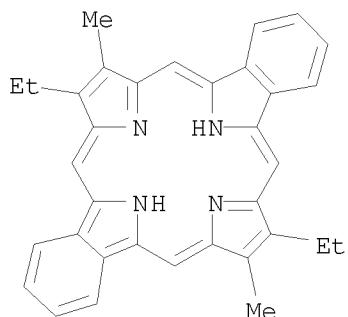
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 28 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:354168 CAPLUS
DOCUMENT NUMBER: 141:314039
TITLE: Quasi-line vibronic spectra of 2,3,12,13-tetramethyldibenzoporphine and their interpretation
AUTHOR(S): Solovyov, Konstantin N.; Arabei, Serguei M.; Gladkov, Lev L.; Konstantinova, Vera K.; Turkova, Alisa E.; Avlasevich, Yuri S.
CORPORATE SOURCE: Institute of Molecular and Atomic Physics, National Academy of Sciences of Belarus, Minsk, 220072, Belarus
SOURCE: Journal of Porphyrins and Phthalocyanines (2003), 7(11 & 12), 787-794
CODEN: JPPHFZ; ISSN: 1088-4246
PUBLISHER: Society of Porphyrins & Phthalocyanines
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The quasi-line fluorescence and fluorescence excitation spectra of 2,3,12,13-tetramethyldibenzoporphine have been obtained at 77 K in n-octane and analyzed. The normal-coordinate anal. of this mol. has been performed, and the spectra have been interpreted in detail. In the Soret band region the fluorescence excitation quasi-line spectra clearly reveal two 0-0 components. The problem of the nature of the Soret band of free-base porphyrins is discussed.
IT 157869-32-4
RL: PRP (Properties)
(quasi-line vibronic spectra of 2,3,12,13-tetramethyldibenzoporphine and their interpretation)
RN 157869-32-4 CAPLUS
CN 25H,27H-Dibenzo[b,l]porphine, 8,9,20,21-tetramethyl- (9CI) (CA INDEX NAME)

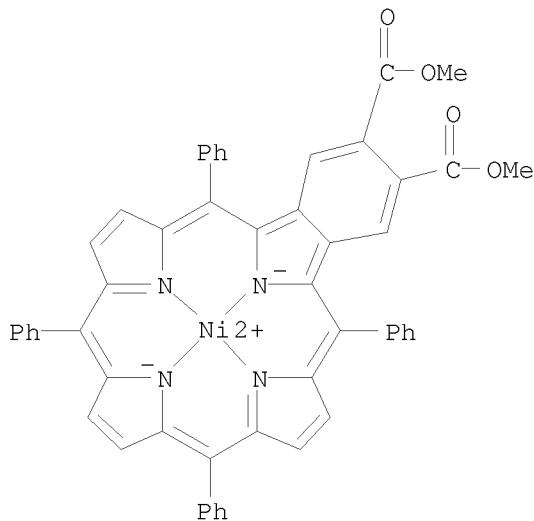


REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 29 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:202762 CAPLUS
DOCUMENT NUMBER: 142:240331
TITLE: Product class 8: porphyrins and related compounds
AUTHOR(S): Smith, K. M.; Vicente, M. G. H.
CORPORATE SOURCE: Louisiana State University, Baton Rouge, LA,
70803-2755, USA
SOURCE: Science of Synthesis (2004), 17, 1081-1235
CODEN: SSCYJ9
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review. Preparation of porphyrins i. e. porphines and related compds. is given.
IT 81976-22-9P 255366-66-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of porphyrins and related compds.)
RN 81976-22-9 CAPLUS
CN 25H,27H-Dibenzo[b,l]porphine, 8,20-diethyl-9,21-dimethyl- (9CI) (CA INDEX NAME)



RN 255366-66-6 CAPLUS
CN Nickel, [dimethyl 6,11,16,21-tetraphenyl-23H,25H-benzo[b]porphine-2,3-dicarboxylato(2-)-κN23,κN24,κN25,κN26]-, (SP-4-1)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 577 THERE ARE 577 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 30 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2003:971163 CAPLUS
 DOCUMENT NUMBER: 140:21921
 TITLE: Organic semiconductor material and organic electronic device
 INVENTOR(S): Aramaki, Shinji; Ono, Noboru
 PATENT ASSIGNEE(S): Mitsubishi Chemical Corporation, Japan
 SOURCE: U.S. Pat. Appl. Publ., 39 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20030226996	A1	20031211	US 2003-396512	20030326
US 7193237	B2	20070320		
JP 2003304014	A	20031024	JP 2002-104639	20020408
JP 2004006750	A	20040108	JP 2003-84816	20030326
US 20070145361	A1	20070628	US 2007-671085	20070205
JP 2008270843	A	20081106	JP 2008-205635	20080808
PRIORITY APPLN. INFO.:			JP 2002-89425	A 20020327
			JP 2002-104639	A 20020408
			JP 2003-84816	A3 20030326
			US 2003-396512	A3 20030326

AB An organic semiconductor material which has high carrier mobility and stability and which can be formed into a film by a simple production process such as a coating process, and an organic electronic device employing such an organic semiconductor material is claimed. An organic semiconductor material comprising a compound which has a generalized porphyrin skeleton and which has a mol. structure such that the distance from the generalized porphyrin

ring plane to the center of each atom forming the generalized porphyrin skeleton, is $\leq 1 \text{ \AA}$.

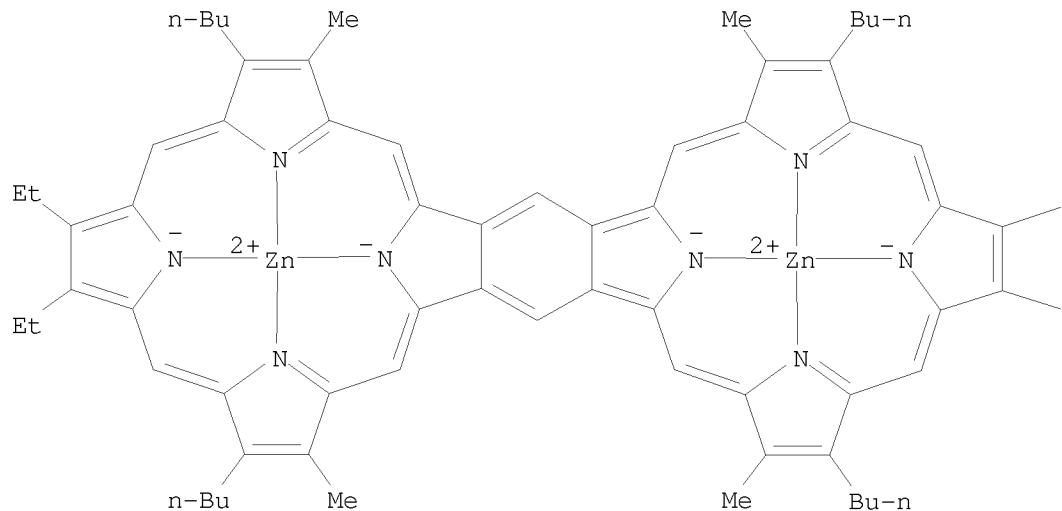
IT 406483-35-0P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation and devices from)

RN 406483-35-0 CAPLUS

CN Zinc, [μ -[5,14,24,33-tetrabutyl-9,10,28,29-tetraethyl-4,15,23,34-tetramethyl-39H,41H,43H,45H-benzo[1,2-b:4,5-b']diporphinato(4-)- κ N39, κ N40, κ N41, κ N42: κ N43, κ N44, κ N45, κ N46]]di- (9CI) (CA INDEX NAME)

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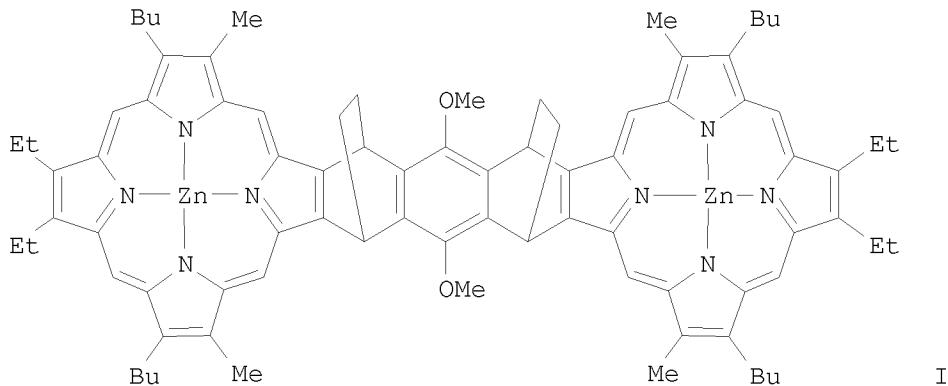
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REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 31 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:724055 CAPLUS

DOCUMENT NUMBER: 139:316045
TITLE: Hexagonal Columnar Porphyrin Assembly by Unique Trimeric Complexation of a Porphyrin Dimer with π - π Stacking: Remarkable Thermal Behavior in a Solid
AUTHOR(S): Uno, Hidemitsu; Masumoto, Akane; Ono, Noboru
CORPORATE SOURCE: Division of Synthesis and Analysis, Department of Molecular Science, Integrated Center for Sciences (INCS), Ehime University, Matsuyama, 790-8577, Japan
SOURCE: Journal of the American Chemical Society (2003), 125(40), 12082-12083
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 139:316045
GI



AB Syn- and anti-I were prepared and characterized by single crystal structural anal. On heating, syn-I, the crystal structure of which showed a unique trimeric assembly, lost an ethylene mol. at 240–310° to give a porphyrin-naphthoporphyrin diad, and the 2nd Diels-Alder reaction and concomitant decomposition of the methoxy groups occurred at 280–350° to the anthraquinone derived diporphyrin, while the 1st thermal conversion of anti-I occurred in a much low temperature range (180–230°). Syn-exhibits hexagonal columnar --stacking interaction which may explain the difference in thermal behavior.

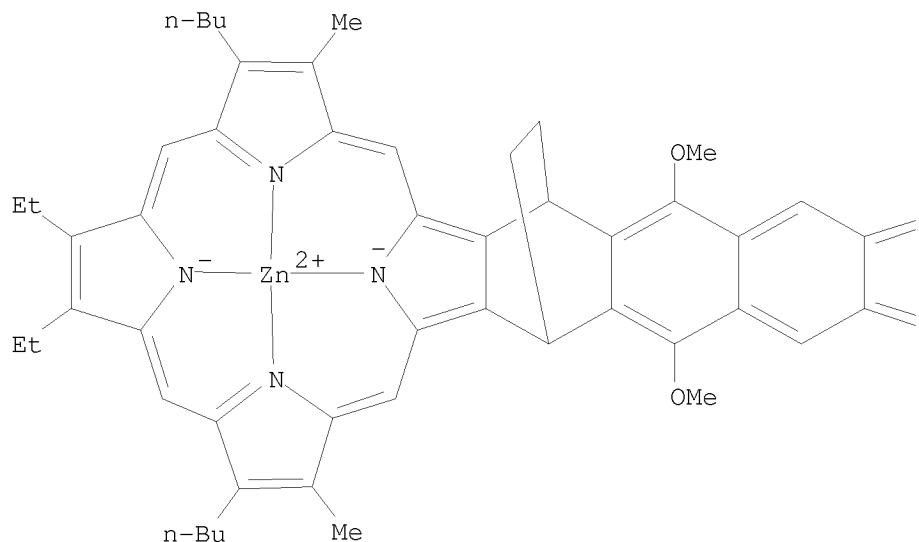
IT 610269-60-8P 610269-61-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation from thermal decomposition of zinc complexes with porphyrin having

fused di(ethano)anthracene)

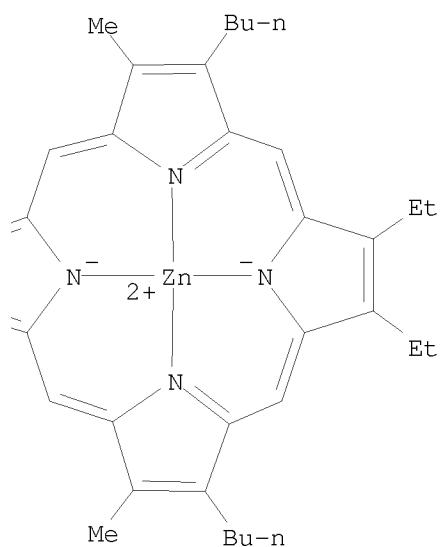
RN 610269-60-8 CAPLUS

CN Zinc, [μ -[5,14,26,35-tetrabutyl-9,10,30,31-tetraethyl-19,42-dihydro-20,41-dimethoxy-4,15,25,36-tetramethyl-19,42-ethano-43H,45H,47H,49H-anthra[2,3-b:6,7-b']diporphinato(4-)-
 κ N43, κ N44, κ N45, κ N46: κ N47, κ N48, κ N49, κ N50]]di- (9CI) (CA INDEX NAME)

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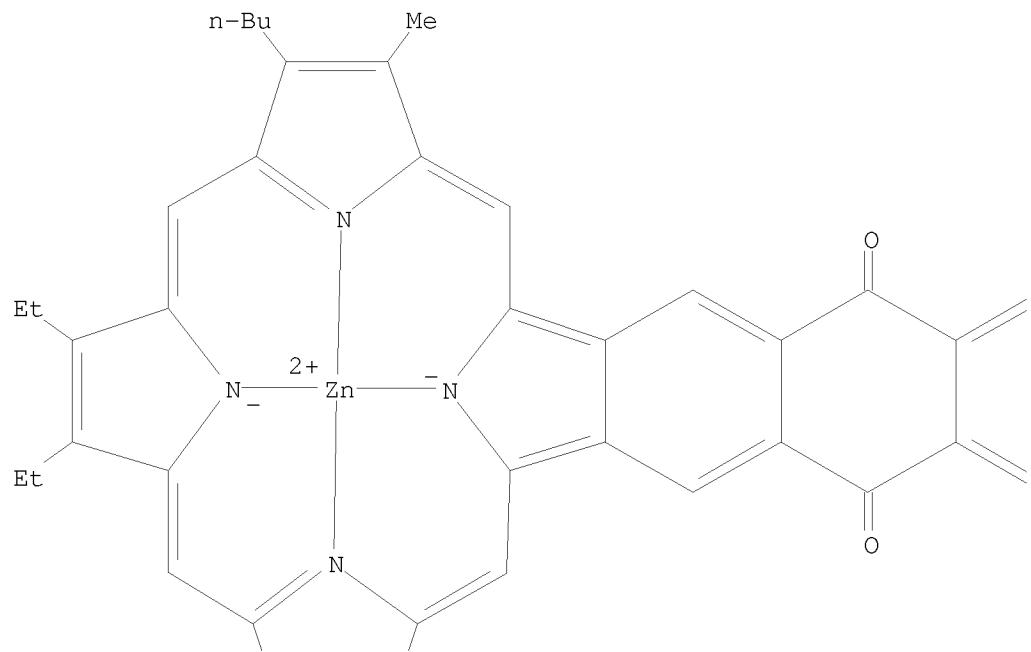


PAGE 1-B

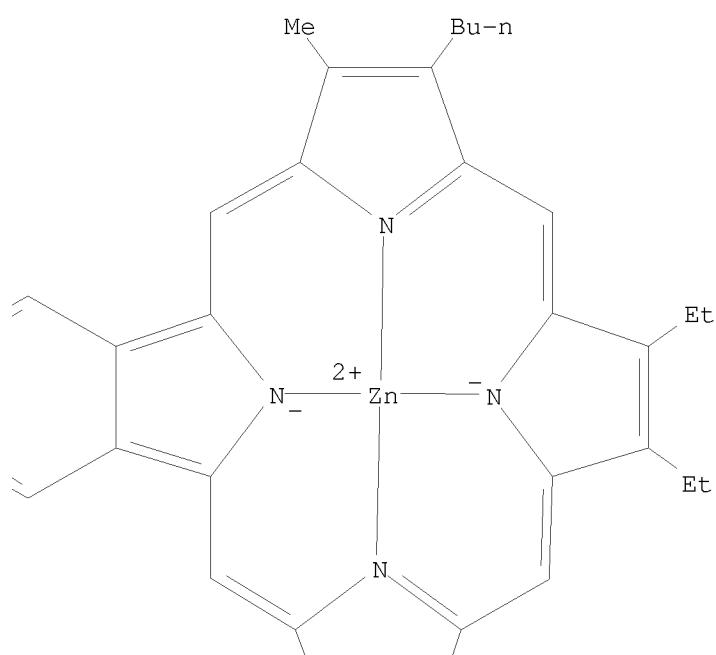


RN 610269-61-9 CAPLUS
CN Zinc, [μ -[5,14,26,35-tetrabutyl-9,10,30,31-tetraethyl-4,15,25,36-tetramethyl-43H,45H,47H,49H-anthra[2,3-b:6,7-b']diporphine-20,41-dionato(4-κN43,κN44,κN45,κN46:κN47,κN48,.κappa.N49,κN50)]di- (9CI) (CA INDEX NAME)

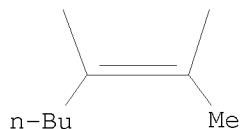
PAGE 1-A



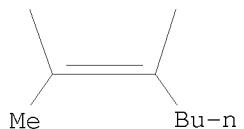
PAGE 1-B



PAGE 2-A

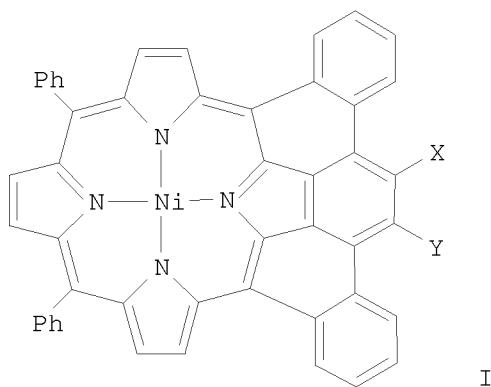


PAGE 2-B



REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 32 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2003:681122 CAPLUS
 DOCUMENT NUMBER: 139:285109
 TITLE: Ambient Temperature Activation of
 Haloporphyrinic-Enediynes: Electronic Contributions to
 Bergman Cycloaromatization
 AUTHOR(S): Nath, Mahendra; Huffman, John C.; Zaleski, Jeffrey M.
 CORPORATE SOURCE: Department of Chemistry, Indiana University,
 Bloomington, IN, 47405, USA
 SOURCE: Journal of the American Chemical Society (2003),
 125(38), 11484-11485
 CODEN: JACSAT; ISSN: 0002-7863
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 139:285109
 GI



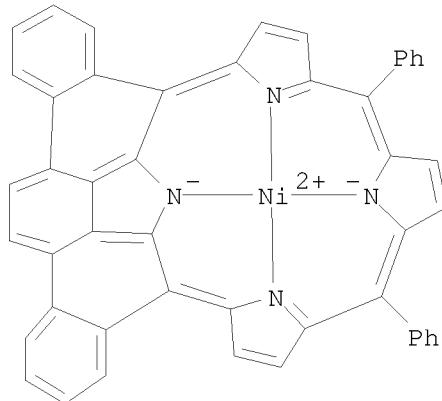
AB The authors synthesized the nickel(II) 2,3-bis(haloethyl)–5,10,15,20-tetraphenylporphyrins with –Br (2a) or –I (2b) at the alkyne termini position from the corresponding 2,3-diethyl analog (1). The cross coupling of nickel(II) 2,3-dibromo-5,10,15,20-tetraphenylporphyrin with trimethyl(trimethylstannyl)ethynylsilane in the presence of a Pd0 catalyst and subsequent deprotection with base under aqueous conditions yields the nickel(II) 2,3-diethyl-5,10,15,20-tetraphenylporphyrin (1). Subsequent reaction of 1 with N-bromo- or N-iodosuccinimide in dry acetone in the presence of AgNO3 yields 2,3-bis(haloethyl)–5,10,15,20-tetraphenylporphyrins in 70% (2a) and 68% (2b) yields. The x-ray crystal structures of 2a,b show that the porphyrin backbone deviates significantly from planarity due to a Ni(II)-induced mixture of the classic ruffle and saddle distortions. Thermolysis of 2a at 190° for 6 h in chlorobenzene and 30-fold 1,4-cyclohexadiene (CHD) generates the Bergman cyclized nickel(II) dibromopicenoporphyrin product (3: I, X = Y = Br) in 65% yield, which derives from diradical addition across the adjacent meso-Ph substituents. Similarly, nickel(II) 2,3-bis(iodoethyl)–5,10,15,20-tetraphenylporphyrin, 2b, cyclizes at 190° in chlorobenzene/CHD via high-temperature substitution of iodine by hydrogen (from CHD) or chlorine (from solvent) to afford a mixture of 4 (I, X = Y = H, 15%) and 5 (I, X = H, Y = Cl, 45%). Remarkably, ambient temperature incubation of 2a in MeOH/CHCl3 (1:3, 22 h) or chlorobenzene/CHD (3:1, 24 h) gives 3 in 15% and 22% isolated yields, resp. Addition of 1.2 equiv of 2,3-dichloro-5,6-dicyano-1,4-benzoquinone (DDQ) in CHCl3/MeOH dramatically accelerates the rate of reaction, producing 3 in 30% yield within 0.5 h. The origin of the ambient temperature activation of 2a derives from the ability of electron-withdrawing functionalities at the alkyne termini to decrease the activation barrier to the Bergman product.

IT 380447-58-5P 607391-89-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation by Bergman cycloaromatization)

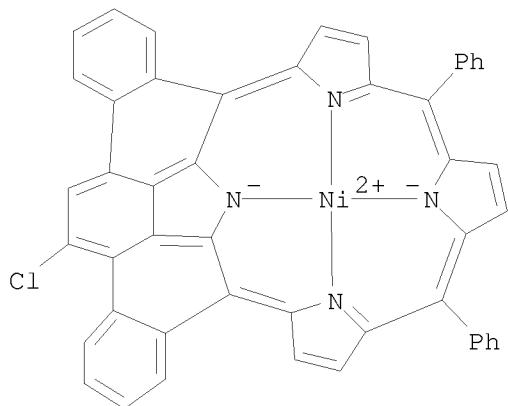
RN 380447-58-5 CAPLUS

CN Nickel, [11,16-diphenyl-1,21[1',2']:4,6[1'',2'']-dibenzeno-23H,25H-
benzo[b]porphinato(2-)–κN23,κN24,κN25,κN26]–,
(SP-4-1)– (9CI) (CA INDEX NAME)

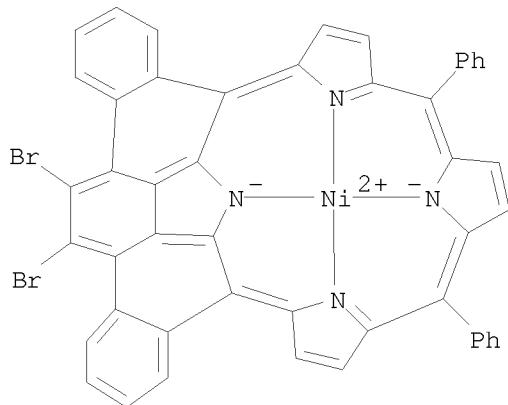


RN 607391-89-9 CAPLUS

CN Nickel, [2-chloro-11,16-diphenyl-1,21[1',2']:4,6[1'',2'']-dibenzeno-
23H,25H-benzo[b]porphinato(2)-
κN23,κN24,κN25,κN26]-, (SP-4-2)- (9CI) (CA INDEX
NAME)



IT 607391-88-8P 607391-95-7P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation by Bergman cycloaromatization and crystal and mol. structure)
RN 607391-88-8 CAPLUS
CN Nickel, [2,3-dibromo-11,16-diphenyl-1,21[1',2']:4,6[1'',2'']-dibenzeno-
23H,25H-benzo[b]porphinato(2-)-
 κ N23, κ N24, κ N25, κ N26]-, (SP-4-1)- (9CI) (CA INDEX
NAME)

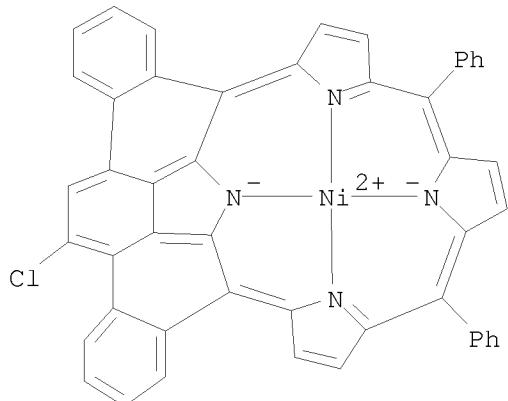


RN 607391-95-7 CAPLUS
CN Nickel, [2-chloro-11,16-diphenyl-1,21[1',2']:4,6[1'',2'']-dibenzene-
23H,25H-benzo[b]porphinato(2)-
κN23,κN24,κN25,κN26]-, (SP-4-2)-, compd. with
benzene (4:3) (9CI) (CA INDEX NAME)

CM 1

CRN 607391-89-9

CMF C48 H25 Cl N4 Ni
CCI CCS



CM 2

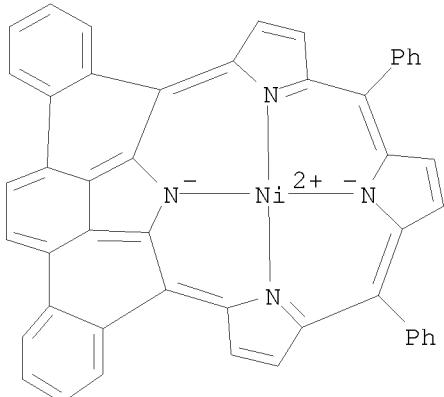
CRN 71-43-2
CMF C6 H6



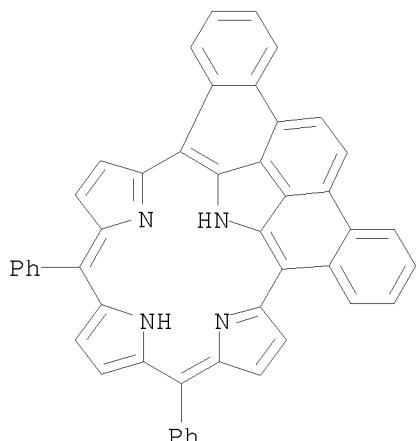
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 33 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:238771 CAPLUS
DOCUMENT NUMBER: 139:117243
TITLE: Accelerated Bergman cyclization of porphyrinic-enediynes
AUTHOR(S): Nath, Mahendra; Huffman, John C.; Zaleski, Jeffrey M.
CORPORATE SOURCE: Department of Chemistry, Indiana University,
Bloomington, IN, USA
SOURCE: Chemical Communications (Cambridge, United Kingdom)
(2003), (7), 858-859
CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 139:117243
AB The Bergman cyclization of simple diethynylporphyrinic-enediynes exhibits a double activation barrier to the formation of Bergman cyclized products. Addition of H-atom acceptor accelerates the formation of the picenoporphyrin, indicating that the second barrier is rate limiting.
IT 380447-58-5P 564475-27-0P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(crystal structure; accelerated Bergman cyclization of

porphyrinic-enediynes)
RN 380447-58-5 CAPLUS
CN Nickel, [11,16-diphenyl-1,21[1',2']:4,6[1'',2'']-dibenzeno-23H,25H-benzo[b]porphinato(2-)–κN23,κN24,κN25,κN26]–, (SP-4-1)– (9CI) (CA INDEX NAME)



RN 564475-27-0 CAPLUS
CN 1,21[1',2']:4,6[1'',2'']-Dibenzeno-23H,25H-benzo[b]porphine, 11,16-diphenyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 34 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:151529 CAPLUS
DOCUMENT NUMBER: 139:6702
TITLE: Establishing a library of porphyrin building blocks for superstructured assemblies: Porphyrin dienes and dienophiles for cycloaddition reactions
AUTHOR(S): Gunter, Maxwell J.; Tang, Hesheng; Warrener, Ronald N.
CORPORATE SOURCE: Division of Chemistry, University of New England,

SOURCE: Armidale, NSW 2351, Australia
 Journal of Porphyrins and Phthalocyanines (2002), 6(11 & 12), 673-684

PUBLISHER: CODEN: JPPHFZ; ISSN: 1088-4246
 Society of Porphyrins & Phthalocyanines
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 139:6702

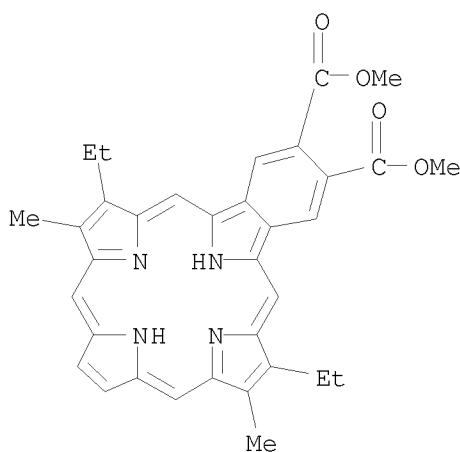
AB The synthesis and utility of a series of porphyrins with (masked) diene and dienophile functionality are described. The key porphyrin diene is synthesized from a sulfolenopyrrole by a 3+1 strategy. A range of Diels-Alder cycloadducts is readily accessed from the diene by mild thermal extrusion of sulfur dioxide from the sulfolenoporphyrin, which produces the reactive porphodimethylidene. Each of these cycloadducts is fused to the porphyrin nucleus through a cyclohexene ring thus retaining some conformational flexibility in the resultant structures. The structures can be rigidified by mild oxidation to the corresponding benzo-derivs. Diels-Alder reaction of the porphyrin 1,3-diene resulting from the sulfolenoporphyrin with norbornadiene produces the norbornene derivative, which can serve as a dienophile or dipolarophile in subsequent cycloaddn. reactions. Nevertheless, a preferred route to this structure is through a corresponding 1+3 route, where the norbornene component is part of the tripyrrane. Extension of the synthetic protocols allows ready access to a "mixed function" porphyrin, containing both diene and dienophile components. Likewise, the synthesis of a bis-norbornene porphyrin is described. A collection of each of these reactive components is the basis for a library of building blocks which allows easy and simple entry to a wide variety of complex porphyrin-containing superstructures.

IT 532993-93-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (establishing a library of porphyrin dienes and dienophiles for cycloaddn. reactions)

RN 532993-93-4 CAPLUS

CN 23H,25H-Benz[b]porphine-2,3-dicarboxylic acid,
 8,19-diethyl-9,18-dimethyl-, dimethyl ester (9CI) (CA INDEX NAME)

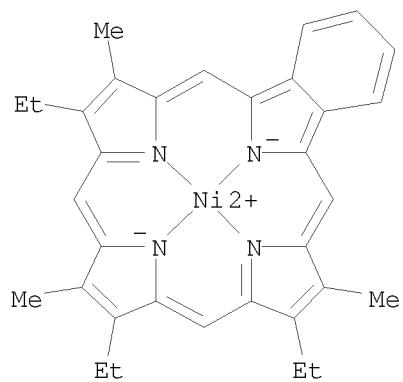


REFERENCE COUNT:

38

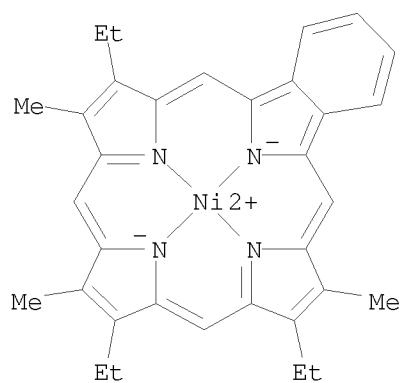
THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 35 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:631085 CAPLUS
DOCUMENT NUMBER: 138:92379
TITLE: Fingerprinting petroporphyrin structures with vibrational spectroscopy. Part 6: resonance Raman characterization of regioisomers of nickel(II) benzoetioporphyrin
AUTHOR(S): Boggess, James M.; Czernuszewicz, Roman S.; Lash, Timothy D.
CORPORATE SOURCE: Department of Chemistry, University of Houston, Houston, TX, 77204-5003, USA
SOURCE: Organic Geochemistry (2002), 33(9), 1111-1126
CODEN: ORGEDE; ISSN: 0146-6380
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Nickel(II) complexes of the geochem. significant four regioisomers of benzoetioporphyrin, Ni(BP-A-D), which contain a benzene ring fused onto the C β atoms of a pyrrole ring, have been synthesized and structurally characterized by resonance Raman spectroscopy. Laser excitations in resonance with the porphyrin Soret (406.7 nm) and Q (530.9 and 568.2 nm) electronic absorption bands exposed nearly all Raman active vibrations in the fingerprint region (100-1700 cm⁻¹). The porphyrin skeletal vibrations above 1300 cm⁻¹ are largely unaffected by the different location of the β,β -benzo exocyclic ring, but their frequencies indicate slightly more planar structures in solution for Ni(BP) porphyrins relative to nickel tetrahydrobenzo- and etioporphyrins. Several unique marker bands are also found for vibrations of the β,β -benzo substituent, especially in the Soret-band resonant spectra. Alkyl substituent and porphyrin skeletal vibrations in the low- (350-550 cm⁻¹) and mid-frequency (750-1300 cm⁻¹) regions show striking sensitivity to small conformational changes in the porphyrin, allowing the four Ni(BP) regioisomers to be readily distinguished.
IT 483979-43-7 483979-44-8 483979-45-9
483979-46-0
RL: ANT (Analyte); PRP (Properties); ANST (Analytical study)
(resonance Raman spectra of regioisomers of nickel(II)
benzoetioporphyrin)
RN 483979-43-7 CAPLUS
CN Nickel, [9,14,18-triethyl-8,13,19-trimethyl-23H,25H-benzo[b]porphinato(2-) -
 κ N23, κ N24, κ N25, κ N26]-, (SP-4-2)- (9CI) (CA INDEX
NAME)



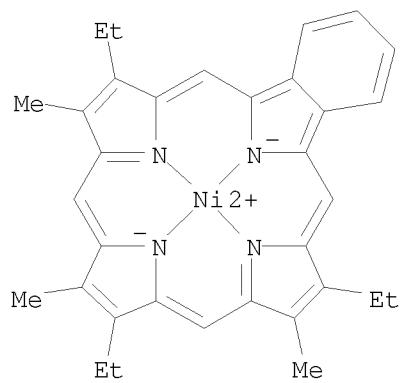
RN 483979-44-8 CAPLUS

CN Nickel, [8,14,18-triethyl-9,13,19-trimethyl-23H,25H-benzo[b]porphinato(2-)-κN23,κN24,κN25,κN26]-, (SP-4-2)- (9CI) (CA INDEX
NAME)

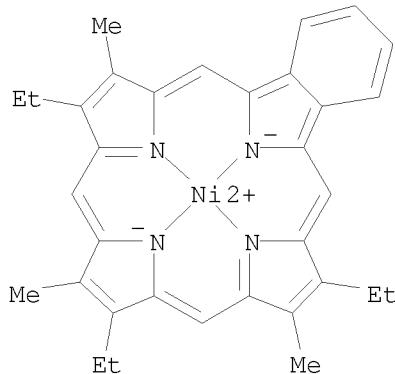


RN 483979-45-9 CAPLUS

CN Nickel, [8,13,19-triethyl-9,14,18-trimethyl-23H,25H-benzo[b]porphinato(2-)-κN23,κN24,κN25,κN26]-, (SP-4-2)- (9CI) (CA INDEX
NAME)

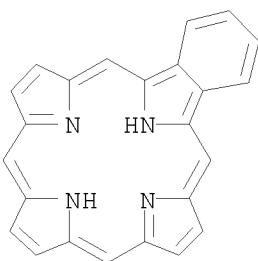


RN 483979-46-0 CAPLUS
CN Nickel, [8,13,18-triethyl-9,14,19-trimethyl-23H,25H-benzo[b]porphinato(2-) -
κN23,κN24,κN25,κN26]-, (SP-4-2)- (9CI) (CA INDEX
NAME)



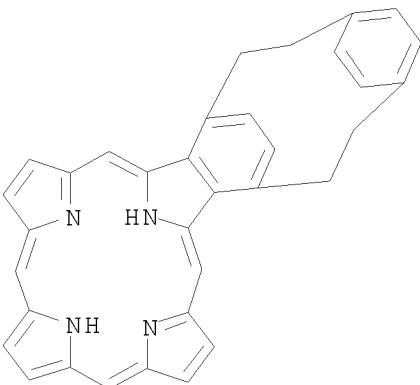
REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 36 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:525234 CAPLUS
DOCUMENT NUMBER: 137:369676
TITLE: Theoretical optical spectra of some [22](1,4)-cyclophane fused tetraazaporphyrins
AUTHOR(S): Turker, Lemi
CORPORATE SOURCE: Department of Chemistry, Middle East Technical University, Ankara, 06531, Turk.
SOURCE: THEOCHEM (2002), 588, 133-138
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB ZINDO/S type semiempirical MO calcns. were carried out on the benzo and [22](1,4)-cyclophane fused tetraazaporphyrins. The phane deck is influential on UV-visible singlet transitions causing some bathochromic shifts.
IT 36469-17-7, 23H,25H-Benzo[b]porphine 475595-26-7
RL: PRP (Properties)
(theor. optical spectra of some [22](1,4)-cyclophane fused tetraazaporphyrins)
RN 36469-17-7 CAPLUS
CN 23H,25H-Benzo[b]porphine (9CI) (CA INDEX NAME)



RN 475595-26-7 CAPLUS

CN 1,10:4,7-Dietheno-29H,31H-cyclododeca[b]porphine, 2,3,8,9-tetrahydro- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 37 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:406065 CAPLUS

DOCUMENT NUMBER: 137:140367

TITLE: Conjugated Macrocycles Related to the Porphyrins.
21. Synthesis, Spectroscopy, Electrochemistry, and Structural Characterization of Carbaporphyrins

AUTHOR(S): Lash, Timothy D.; Hayes, Michael J.; Spence, John D.; Muckey, Melanie A.; Ferrence, Gregory M.; Szczeplura, Lisa F.

CORPORATE SOURCE: Department of Chemistry, Illinois State University, Normal, IL, 61790-4160, USA

SOURCE: Journal of Organic Chemistry (2002), 67(14), 4860-4874
CODEN: JOCEAH; ISSN: 0022-3263

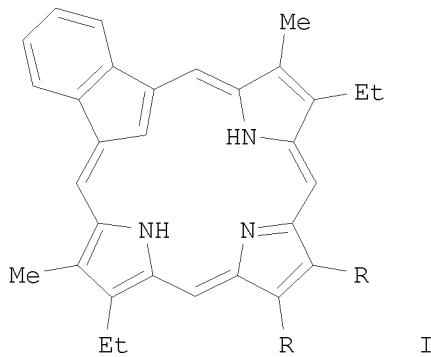
PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 137:140367

GI



AB The "3 + 1" variant of the MacDonald condensation has been shown to be an excellent methodol. for synthesizing carbaporphyrins. In particular, 1,3-indenedicarbaldehyde condenses with tripyrranes in the presence of TFA to give, following oxidation with DDQ, a series of benzocarbaporphyrins in excellent yields. Triformylcyclopentadienes also afford carbaporphyrin products, albeit in low yields ranging from 5 to 8%. These hybrid bridged annulene structures have porphyrin-like electronic absorption spectra with strong Soret bands near 420 nm and a series of Q-bands through the visible region. The proton NMR spectrum confirms the presence of a strong diamagnetic ring current, and the meso-protons show up at 10 ppm, while the internal CH is shielded to approx. -7 ppm. Carbaporphyrins undergo reversible protonation with TFA. Initial addition of acid affords a monocation, although mixts. of protonated species are observed in the presence of moderate concns. of TFA. However, in the presence of 50% TFA a C-protonated dication is generated. The dications relocate the π -delocalization pathway through the benzo moiety of benzocarbaporphyrins, and these therefore represent bridged benzo[18]annulenes, although they nevertheless retain powerful macrocyclic ring currents. Carbaporphyrins with fused acenaphthylene and phenanthrene rings have been prepared, and the former demonstrated significantly larger bathochromic shifts in UV-vis spectroscopy that parallel previous observations for acenaphthoporphyrins. A diphenyl-substituted benzocarbaporphyrin I (R = Ph) was also characterized by X-ray crystallog., and these data show that the macrocycle is reasonably planar although the indene subunit is tilted out of the mean macrocyclic plane by 15.5°. The structural data indicates that the preferred tautomer in the solid state has the two NH's flanking the pyrrolene unit in agreement with previous spectroscopic and theor. studies. Cyclic voltammetry for carbaporphyrin I (R = Et) was more complex than for true porphyrins, showing five anodic waves and two quasi-reversible reductive couples.

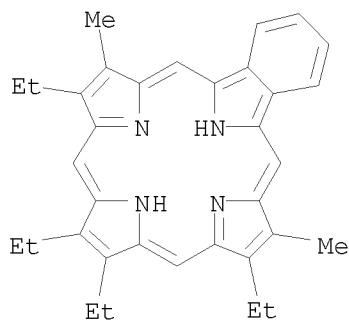
IT 444586-48-5 444586-70-3

RL: PRP (Properties)

(preparation of carbaporphyrins via MacDonald condensation, their UV-visible spectra, cyclic voltammetry, and structure)

RN 444586-48-5 CAPLUS

CN 23H,25H-Benz[b]porphine, 9,13,14,18-tetraethyl-8,19-dimethyl- (9CI) (CA INDEX NAME)



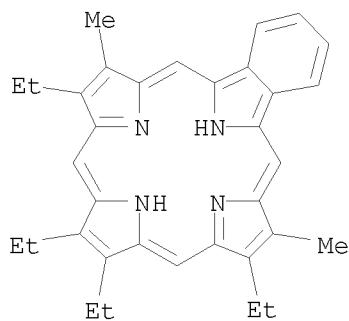
RN 444586-70-3 CAPLUS

CN 23H,25H-Benzo[b]porphine, 9,13,14,18-tetraethyl-8,19-dimethyl-,
mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 444586-48-5

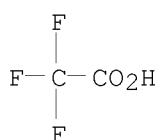
CMF C34 H36 N4



CM 2

CRN 76-05-1

CMF C2 H F3 O2



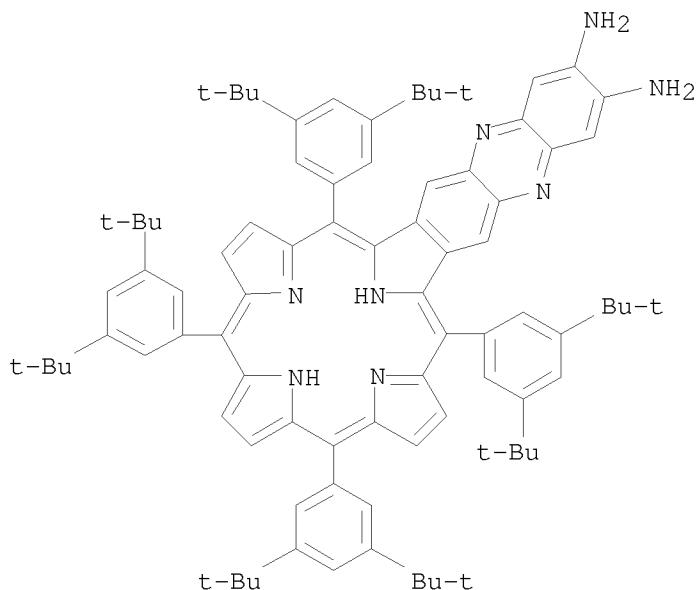
REFERENCE COUNT: 121 THERE ARE 121 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L9 ANSWER 38 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:356333 CAPLUS

DOCUMENT NUMBER: 137:208912

TITLE: Laterally-extended porphyrin systems incorporating a switchable unit
AUTHOR(S): Crossley, Maxwell J.; Johnston, Lesley A.
CORPORATE SOURCE: School of Chemistry, The University of Sydney, 2006, Australia
SOURCE: Chemical Communications (Cambridge, United Kingdom) (2002), (10), 1122-1123
CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
AB P-Quinone units incorporated into the central portion of rigid π -systems linking either two porphyrin macrocycles or a porphyrin and a phenanthroline group have the potential to function as a chemical and electrochem. controllable switch, thus acting as a means of modulating electronic communication between the two end groups.
IT 245445-24-3
RL: PRP (Properties)
(electronic spectrum of)
RN 245445-24-3 CAPLUS
CN 27H,29H-Phenazino[2,3-b]porphine-2,3-diamine,
8,13,18,21-tetrakis[3,5-bis(1,1-dimethylethyl)phenyl]- (9CI) (CA INDEX NAME)



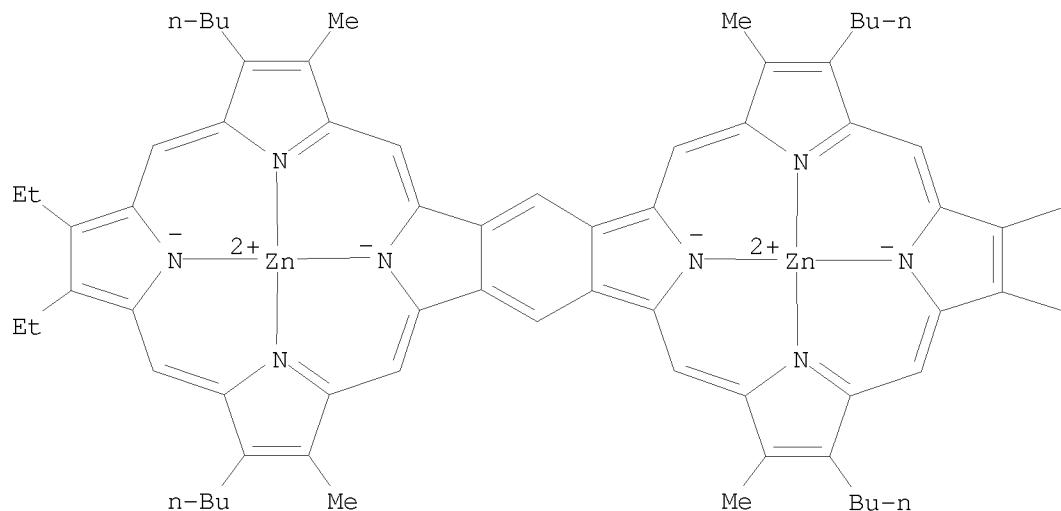
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
L9 ANSWER 39 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:928125 CAPLUS
DOCUMENT NUMBER: 136:288101
TITLE: Synthesis of a gable bis-porphyrin linked with a bicyclo[2.2.2]octadiene ring and its conversion into a conjugated planar bis-porphyrin

AUTHOR(S): Ito, Satoshi; Nakamoto, Ken-ichi; Uno, Hidemitsu;
Murashima, Takashi; Ono, Noboru
CORPORATE SOURCE: Department of Chemistry, Faculty of Science, Ehime
University, Matsuyama, 790-8577, Japan
SOURCE: Chemical Communications (Cambridge, United Kingdom)
(2001), (24), 2696-2697
CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 136:288101
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The dinuclear zinc complex of a soluble porphyrin dimer linked with bicyclo[2.2.2]octadiene (I) was converted into insol. conjugated porphyrin dimer (II) by heating at 200°; this provides a new strategy for the process control of conjugated porphyrins.
IT 406483-35-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 406483-35-0 CAPLUS
CN Zinc, [μ -[5,14,24,33-tetrabutyl-9,10,28,29-tetraethyl-4,15,23,34-tetramethyl-39H,41H,43H,45H-benzo[1,2-b:4,5-b']diporphinato(4-)- κ N39, κ N40, κ N41, κ N42: κ N43, κ N44, κ N45, κ N46]]di- (9CI) (CA INDEX NAME)

PAGE 1-A



Et

Et

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

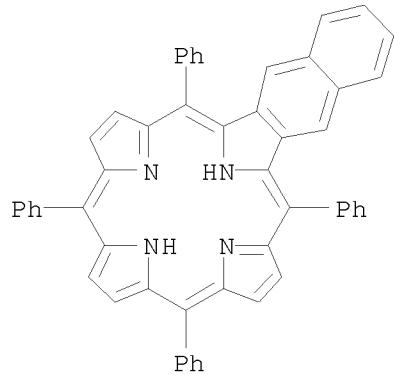
L9 ANSWER 40 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:755288 CAPLUS
DOCUMENT NUMBER: 136:207539
TITLE: Singlet oxygen formation and photostability of meso-tetraarylporphyrin derivatives and their copper complexes
AUTHOR(S): Cavaleiro, Jose A. S.; Gorner, Helmut; Lacerda, Paula S. S.; MacDonald, J. Gavin; Mark, Gertraud; Neves, Maria G. P. M. S.; Nohr, Ronald S.; Schuchmann, Heinz-Peter; von Sonntag, Clemens; Tome, Augusto C.
CORPORATE SOURCE: Department of Chemistry, University of Aveiro, Aveiro, 3810-193, Port.
SOURCE: Journal of Photochemistry and Photobiology, A: Chemistry (2001), 144(2-3), 131-140
CODEN: JPPCEJ; ISSN: 1010-6030
PUBLISHER: Elsevier Science S.A.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Time-resolved photochem. studies of five porphyrin derivs. and their copper complexes were carried out. Triplet lifetimes (room temperature) were determined under argon, air, and oxygen. The presence of oxygen and copper shortens the triplet lifetimes (Ar: in the order of 102 μ s) by up to three orders of magnitude. With the copper complexes, $\Phi[O_2(1\Delta g)]$ is lower than with the metal-free porphyrins. The photodegrdn., indicated by bleaching, of meso-tetraphenylporphyrin and meso-tetrakis(pentafluorophenyl)porphyrin under air shows the latter to be more stable than the former, and their copper complexes to be more stable than the porphyrins themselves. With meso-tetraphenylporphyrin, the effect depends on the solvent, especially in the absence of oxygen (bleaching is faster in toluene than in benzene). With meso-tetraphenylporphyrin in toluene ($\lambda_{irr} = 405$ nm), the quantum yields of bleaching, determined from the rate of fading of the maximum of the Soret band are vs. .apprx.1.8+10⁻⁴ (Ar) and .apprx.1.1+10⁻⁵ (O₂). Two rate consts. have been roughly estimated: (i) for the H-atom abstraction from toluene by the triplet excited meso-tetraphenylporphyrin, in the order of 0.1 dm³ mol⁻¹ s⁻¹; (ii) for the product-forming reaction of O₂(1 Δ g) with meso-tetraphenylporphyrin, 40 dm³ mol⁻¹ s⁻¹.

IT 193283-52-2 401510-86-9 401512-05-8
401512-06-9

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(singlet oxygen formation and photostability of meso-tetraarylporphyrin derivs. and their copper complexes)

RN 193283-52-2 CAPLUS

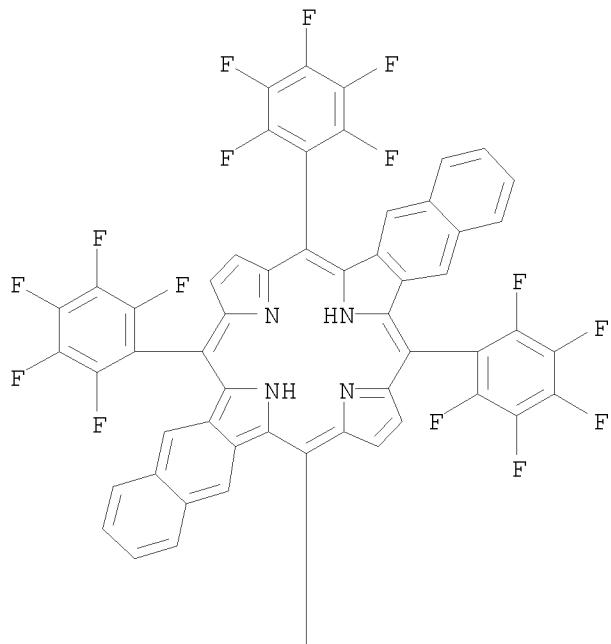
CN 25H,27H-Naphtho[2,3-b]porphine, 7,12,17,22-tetr phenyl- (CA INDEX NAME)



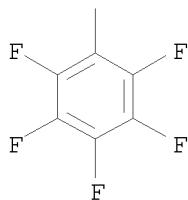
RN 401510-86-9 CAPLUS

CN 29H,31H-Dinaphtho[2,3-b:2',3'-l]porphine,
7,12,21,26-tetrakis(pentafluorophenyl)- (9CI) (CA INDEX NAME)

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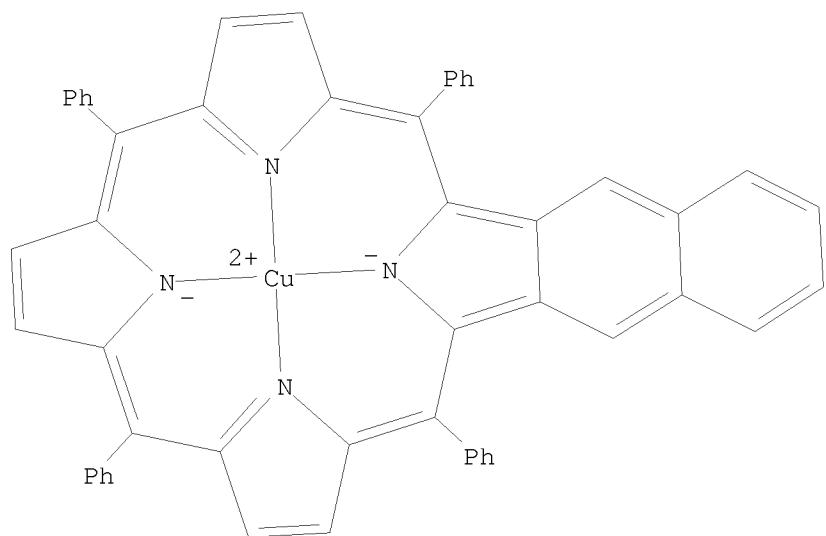


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RN 401512-05-8 CAPLUS

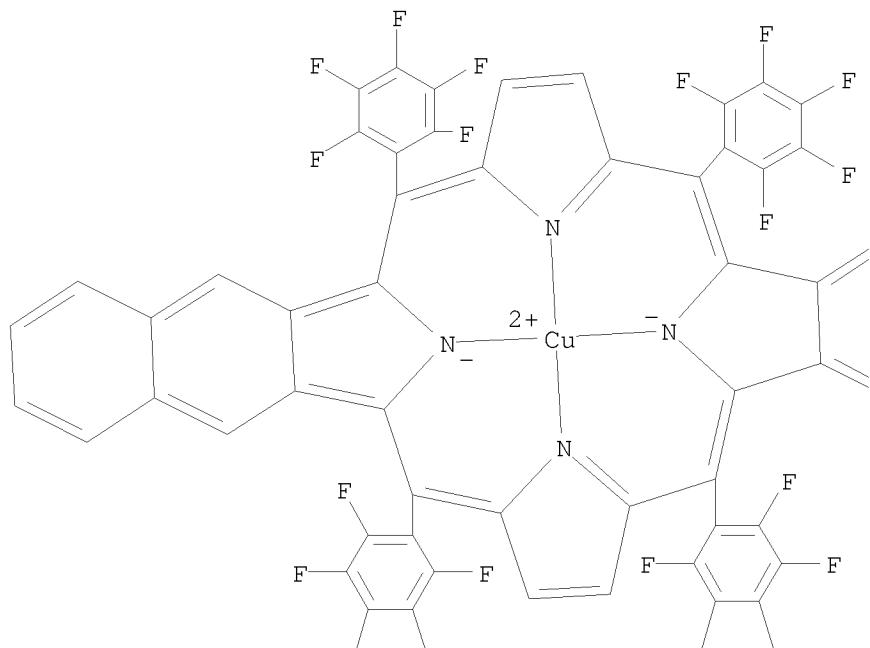
CN Copper, [7,12,17,22-tetraphenyl-25H,27H-naphtho[2,3-b]porphinato(2-)-κN25,κN26,κN27,κN28]-, (SP-4-1)- (9CI) (CA INDEX NAME)



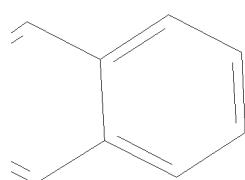
RN 401512-06-9 CAPLUS

CN Copper, [7,12,17,22-tetrakis(pentafluorophenyl)-25H,27H-naphtho[2,3-b]porphinato(2-)-κN25,κN26,κN27,κN28]-, (SP-4-1)- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



PAGE 2-A



REFERENCE COUNT:

70

THERE ARE 70 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 41 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:733732 CAPLUS
DOCUMENT NUMBER: 136:47499
TITLE: Multicarbocycle formation mediated by arenoporphyrin
1,4-diradicals: Synthesis of picenoporphyrins
AUTHOR(S): Aihara, Hidenori; Jaquinod, Laurent; Nurco, Daniel J.;
Smith, Kevin M.
CORPORATE SOURCE: Dep. of Chemistry, University of California, Davis,
CA, 95616, USA
SOURCE: Angewandte Chemie, International Edition (2001),
40(18), 3439-3441
CODEN: ACIEF5; ISSN: 1433-7851
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 136:47499
GI

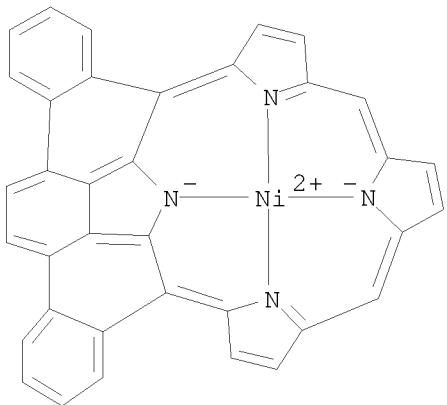
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The authors report unprecedented multicarbocycle formation on the porphyrin periphery by Bergman aromatization of vicinal dialkynylporphyrins, to produce a new class of highly π -extended porphyrins. Nickel(II) 2,3-dialkynyl-5,10,15,20-tetraphenylporphyrins (I; R = TMS, H, Bu, Ph) were prepared by Pd0-catalyzed cross-coupling reactions of nickel(II) 2,3-dibromo-5,10,15,20-tetraphenylporphyrin with the corresponding alkynyl trimethylstannanes. Refluxing the nickel(II) 2,3-dialkynyl-5,10,15,20-tetraphenylporphyrins (I; R = H, Bu, Ph) in 5 % 1,4-cyclohexadiene/chlorobenzene solution gave (II; R = H, Bu, Ph). The new porphyrins obtained from this reactions are named "picenoporphyrins". Compound I (R = H) gave none of the corresponding picenoporphyrin. II (R = H) was characterized by single crystal x-ray diffraction anal. and 1H NMR.

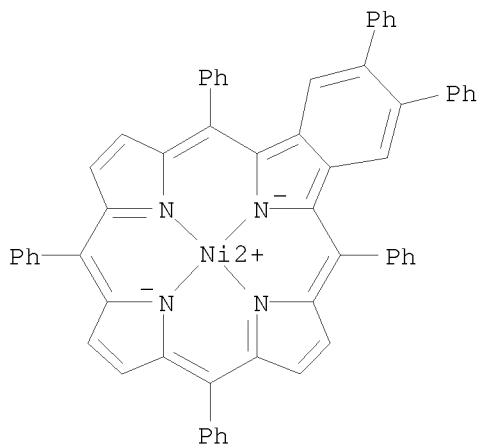
IT 380447-54-1P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and crystal structure of)

RN 380447-54-1 CAPLUS

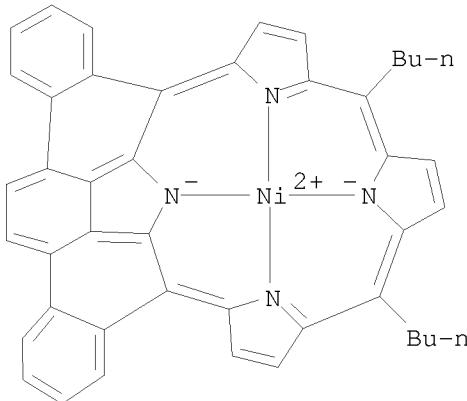
CN Nickel, [1,21[1',2']:4,6[1'',2'']-dibenzeno-23H,25H-benzo[b]porphinato(2-) -
 κ N23, κ N24, κ N25, κ N26]-, (SP-4-1)- (9CI) (CA INDEX
NAME)



IT 740844-63-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and crystal structure of)
RN 740844-63-7 CAPLUS
CN Nickel, [2,3,6,11,16,21-hexaphenyl-23H,25H-benzo[b]porphinato(2-) -
 $\kappa\text{N}23,\kappa\text{N}24,\kappa\text{N}25,\kappa\text{N}26]-$, (SP-4-1)- (9CI) (CA INDEX
NAME)



IT 380447-56-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 380447-56-3 CAPLUS
CN Nickel, [11,16-dibutyl-1,21[1',2']:4,6[1'',2'']-dibenzo-23H,25H-
benzo[b]porphinato(2-) - $\kappa\text{N}23,\kappa\text{N}24,\kappa\text{N}25,\kappa\text{N}26]-$,
(SP-4-1)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 42 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:253573 CAPLUS
DOCUMENT NUMBER: 135:33394
TITLE: Porphyrins with Exocyclic Rings. 16.1 Synthesis and Spectroscopic Characterization of Fluoranthoporphyrins, a New Class of Highly Conjugated Porphyrin Chromophores
AUTHOR(S): Lash, Timothy D.; Werner, Tonya M.; Thompson, Michelle L.; Manley, Jerad M.
CORPORATE SOURCE: Department of Chemistry, Illinois State University, Normal, IL, 61790-4160, USA
SOURCE: Journal of Organic Chemistry (2001), 66(9), 3152-3159
CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 135:33394
GI

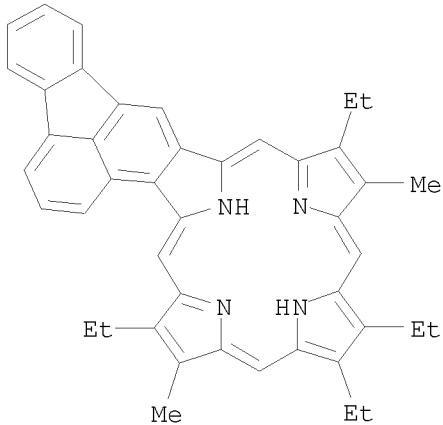
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Porphyrins with fused aromatic rings are under detailed investigation due to their unique spectroscopic properties. To gain more insights into the effects due to ring annealation on the porphyrin chromophore, a series of fluoranthoporphyrins have been synthesized. Reaction of 3-nitrofluoranthene with isocyanoacetate esters in the presence of a phosphazene base afforded good yields of the fluorantho[2,3-c]pyrrole esters. Cleavage of the ester moiety with KOH in ethylene glycol afforded the parent heterocycle (I), and this condensed with 2 equiv of acetoxyethylpyrroles in refluxing acetic acid-2-propanol to afford tripyrranes. Following cleavage of the tert-Bu ester protective groups with TFA, "3 + 1" condensation with pyrrole dialdehyde gave the fluoranthoporphyrins (II) in good overall yields. In addition, reaction of tripyrrane with acenaphthopyrrole dialdehyde gave the mixed

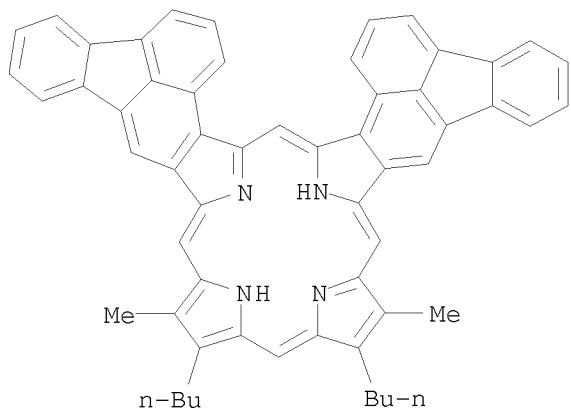
acenaphthofluoranthoporphyrin (III) in excellent yields. A difluoranthoporphyrin (IV) was also prepared via a "2 + 2" MacDonald condensation. Reaction of fluoranthopyrrole with dimethoxymethane in the presence of p-toluenesulfonic acid gave the sym. dipyrromethane, and following ester saponification, this was condensed with a dipyrromethane dialdehyde to afford IV. The UV-vis spectra for these fluoranthoporphyrins gave a series of three broadened absorptions in the Soret band region, although the Q-bands were little effected by ring fusion. The nickel(II), copper(II), and zinc chelates were more unusual, showing strong absorptions near 600 nm. IV showed many of the same spectroscopic features, although the presence of two ring fusions gave rise to an increase in the spectroscopic shifts. III gave spectra that showed larger red shifts due to the acenaphthylene unit combined with the features due to the fluoranthene rings. This work further demonstrates the utility of aromatic ring fusion in altering the properties of porphyrinoid systems.

IT 343922-03-2P 343922-05-4P 343922-10-1P
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (synthesis and spectroscopic characterization of fluoranthoporphyrins,
 a new class of highly conjugated porphyrin chromophores)

RN 343922-03-2 CAPLUS
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 12,17,18,23-tetraethyl-13,22-dimethyl- (9CI) (CA INDEX NAME)

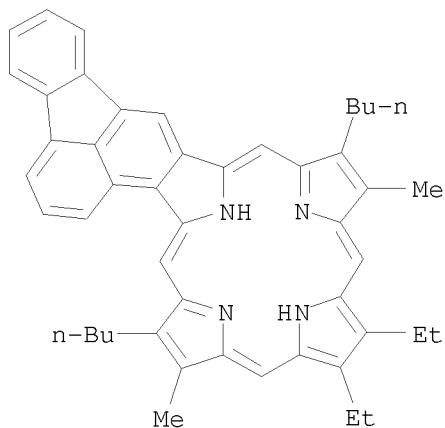


RN 343922-05-4 CAPLUS
 CN 33H,35H-Difluorantheno[2,3-b:3',2'-g]porphine,
 10,14-dibutyl-9,15-dimethyl- (9CI) (CA INDEX NAME)



RN 343922-10-1 CAPLUS

CN 27H,29H-Fluorantheno[2,3-b]porphine,
12,23-dibutyl-17,18-diethyl-13,22-dimethyl- (9CI) (CA INDEX NAME)

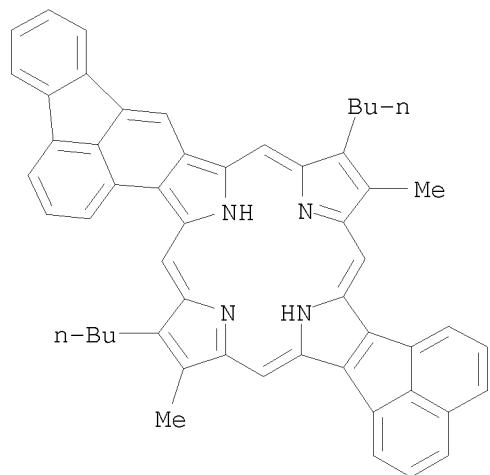


IT 343922-04-3P 344346-14-1P 344346-15-2P
344346-16-3P 344346-17-4P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis and spectroscopic characterization of fluoranthoporphyrins,
a new class of highly conjugated porphyrin chromophores)

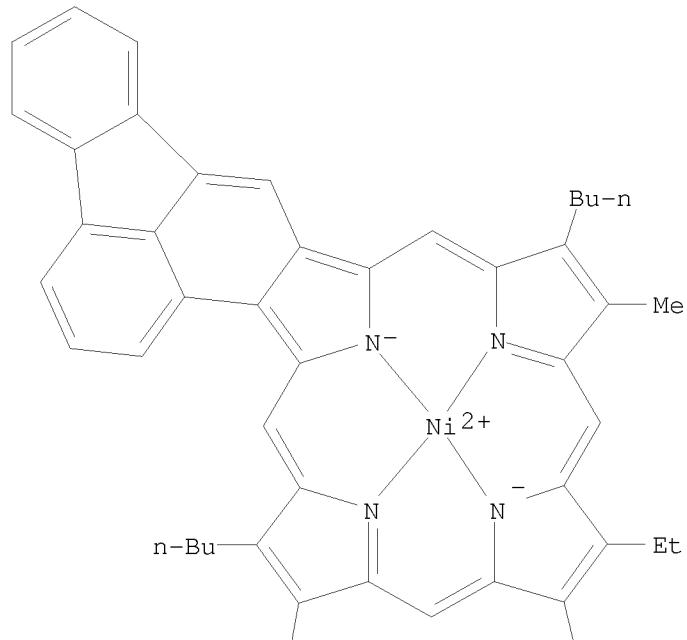
RN 343922-04-3 CAPLUS

CN 31H,33H-Acenaphtho[1,2-b]fluorantheno[2,3-l]porphine,
12,27-dibutyl-13,26-dimethyl- (9CI) (CA INDEX NAME)



RN 344346-14-1 CAPLUS
CN Nickel, [12,23-dibutyl-17,18-diethyl-13,22-dimethyl-27H,29H-fluorantheno[2,3-b]porphinato(2-)-κN27,κN28,κN29,κN30]-, (SP-4-2)- (9CI) (CA INDEX NAME)

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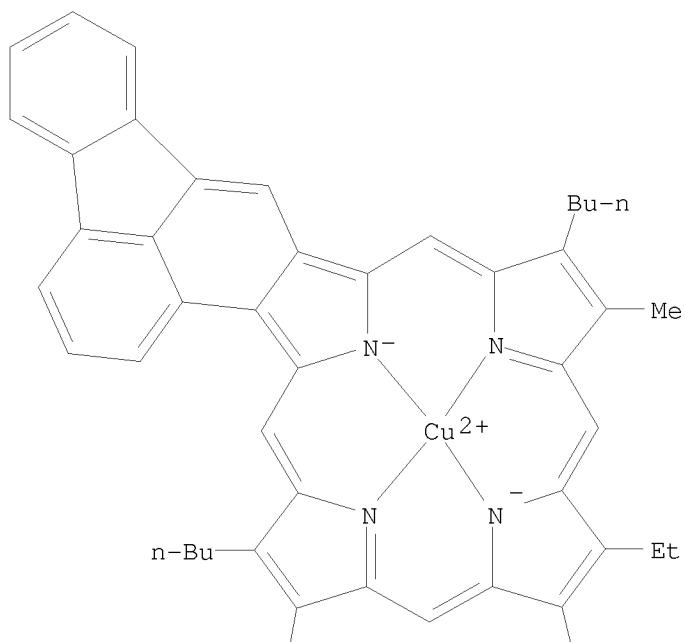


PAGE 2-A



RN 344346-15-2 CAPLUS
CN Copper, [12,23-dibutyl-17,18-diethyl-13,22-dimethyl-27H,29H-fluorantheno[2,3-b]porphinato(2-)-κN27,κN28,κN29,κN30]-, (SP-4-2)- (9CI) (CA INDEX NAME)

PAGE 1-A

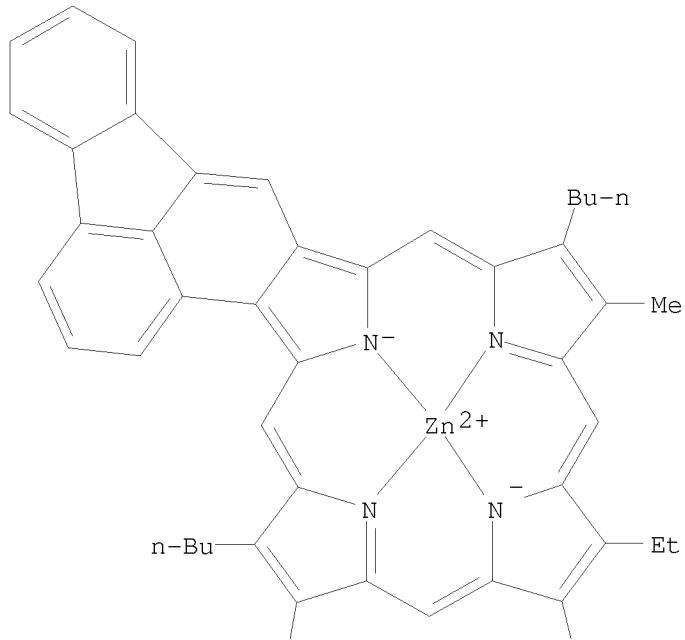


PAGE 2-A



RN 344346-16-3 CAPLUS
CN Zinc, [12,23-dibutyl-17,18-diethyl-13,22-dimethyl-27H,29H-fluorantheno[2,3-b]porphinato(2-)-κN27,κN28,κN29,κN30]-, (SP-4-2)- (9CI) (CA INDEX NAME)

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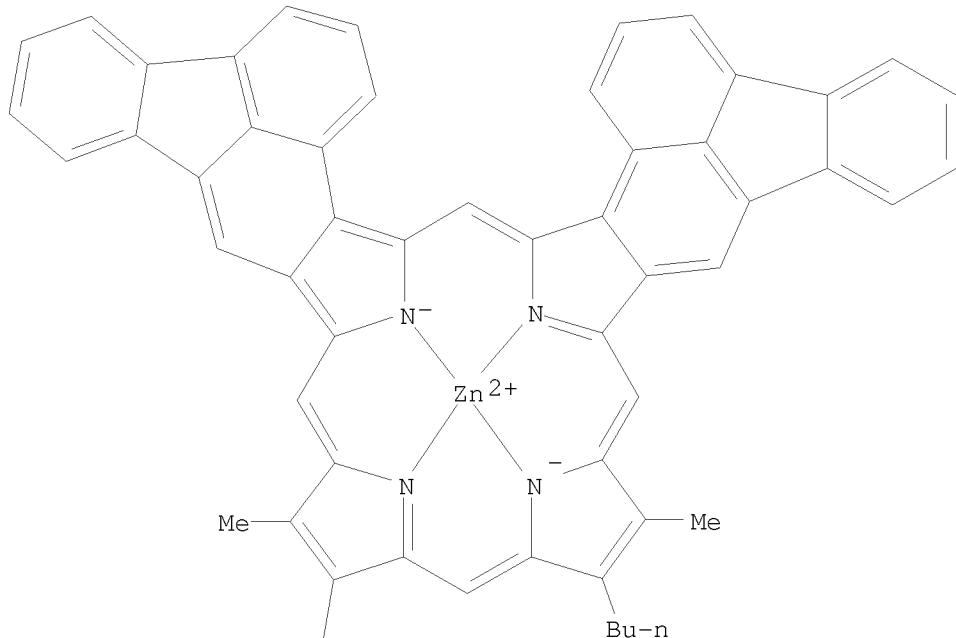
PAGE 2-A



RN 344346-17-4 CAPLUS

CN Zinc, [10,14-dibutyl-9,15-dimethyl-33H,35H-difluorantheno[2,3-b:3',2'-g]porphinato(2-)–κN33,κN34,κN35,κN36]–, (SP-4-1)– (9CI) (CA INDEX NAME)

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PAGE 2-A

/ n-Bu

REFERENCE COUNT: 64 THERE ARE 64 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 43 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2001:190573 CAPLUS
 DOCUMENT NUMBER: 135:67922
 TITLE: Molecular orbitals and electronic spectra of benzo-fused and related porphyrin analogues
 AUTHOR(S): Kobayashi, Nagao; Konami, Hideo
 CORPORATE SOURCE: Department of Chemistry, Graduate School of Science, Tohoku University, Sendai, 980-8578, Japan
 SOURCE: Journal of Porphyrins and Phthalocyanines (2001), 5 (3), 233-255
 CODEN: JPPHFZ; ISSN: 1088-4246
 PUBLISHER: John Wiley & Sons Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB MO calcns. of >60 porphyrinic π conjugated structures were performed within the framework of the PPP approximation. The results of compds. are introduced and summarized to show how they vary depending on the systematic change in mol. structure. These are shown schematically or itemized. The authors' results are compared with the spectra of the

corresponding known compds. and with the MO results reported by previous workers, if available. In addition, the results have continually been compared, where possible, with those of tetraazaporphyrin or phthalocyanine systems. In naphthalene- or anthracene-fused compds., these mol.-centered orbitals often appear, and these are indicated using either triangles or circles in figures if they appear between HOMO - 3 and LUMO + 3 orbitals.

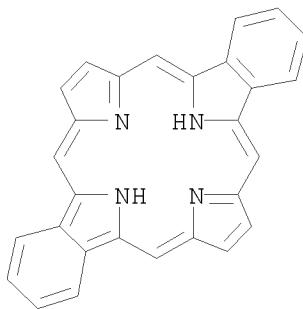
IT 36547-73-6, 25H,27H-Dibenzo[*b,l*]porphine 194869-07-3,
29H,31H-Dinaphtho[2,3-*b*:2',3'-1]porphine 227204-77-5,
33H,35H-Diantha[2,3-*b*:2',3'-1]porphine 345906-82-3
345906-83-4 345906-84-5 345906-88-9
345906-89-0 345906-90-3 345906-94-7
345906-95-8 345906-96-9 345907-09-7,
28H,30H-Tribenzo[*b,g,l*]porphine 345907-14-4

RL: PRP (Properties)

(mol. orbitals and electronic spectra of benzo-fused and related porphyrin analogs)

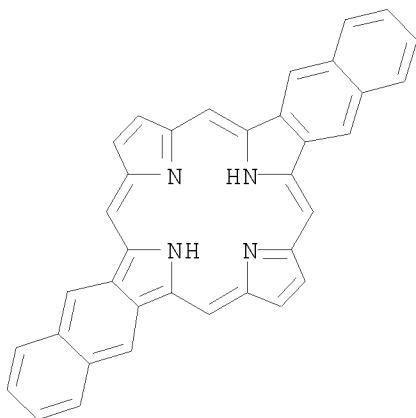
RN 36547-73-6 CAPPLUS

CN 25H,27H-Dibenzo[*b,l*]porphine (9CI) (CA INDEX NAME)



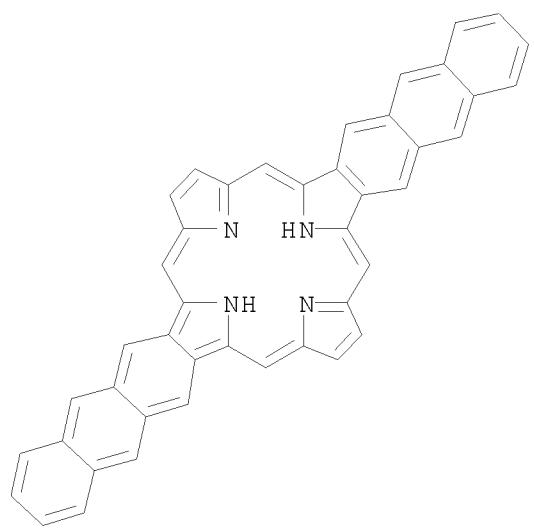
RN 194869-07-3 CAPPLUS

CN 29H,31H-Dinaphtho[2,3-*b*:2',3'-1]porphine (9CI) (CA INDEX NAME)



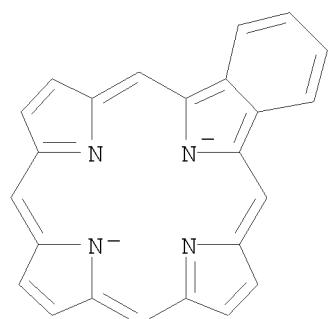
RN 227204-77-5 CAPPLUS

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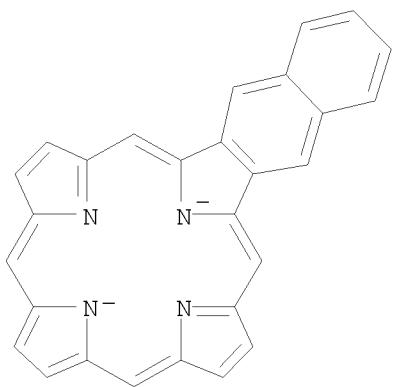
RN 345906-82-3 CAPLUS

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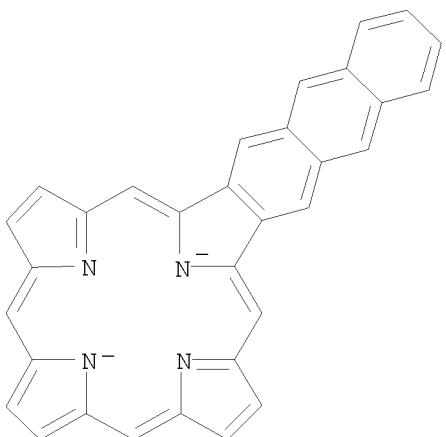


RN 345906-83-4 CAPLUS

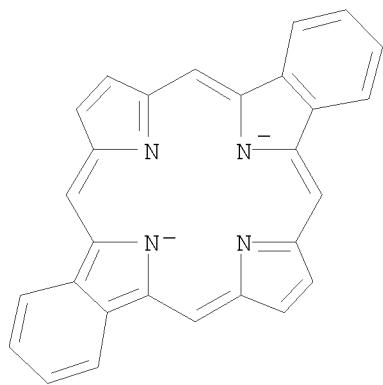
CN 25H,Naphtho[2,3-b]porphine, ion(2-) (9CI) (CA INDEX NAME)



RN 345906-84-5 CAPLUS
CN 27H,29H-Anthra[2,3-b]porphine, ion(2-) (9CI) (CA INDEX NAME)

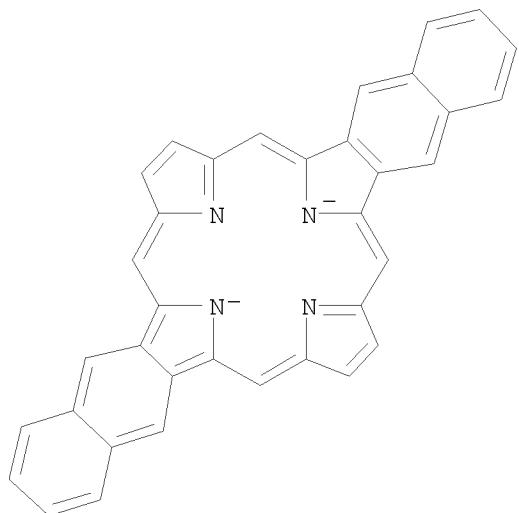


RN 345906-88-9 CAPLUS
CN 25H,27H-Dibenzo[b,l]porphine, ion(2-) (9CI) (CA INDEX NAME)



RN 345906-89-0 CAPLUS

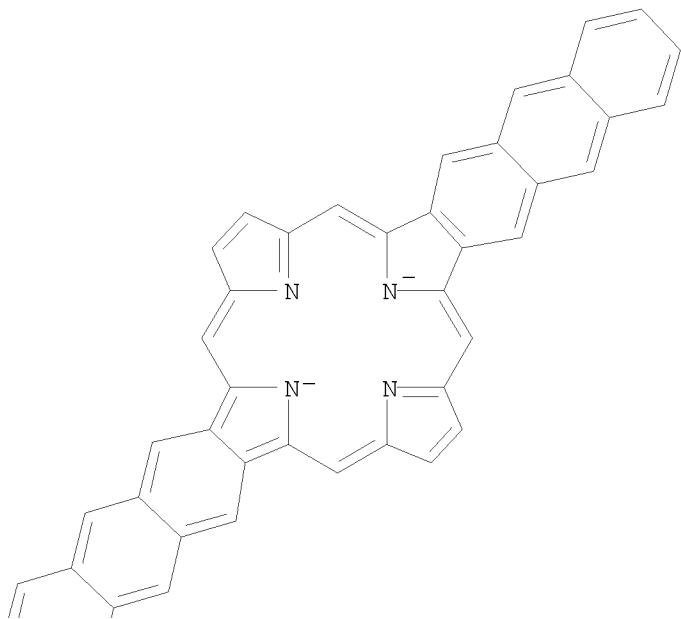
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RN 345906-90-3 CAPLUS

CN 33H,35H-Dianthra[2,3-b:2',3'-l]porphine, ion(2-) (9CI) (CA INDEX NAME)

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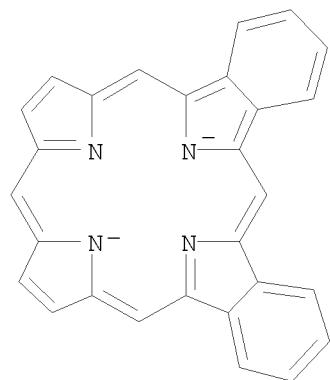


PAGE 2-A



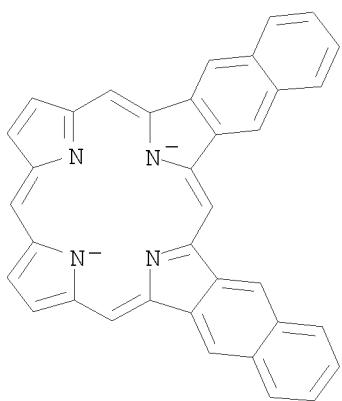
RN 345906-94-7 CAPLUS

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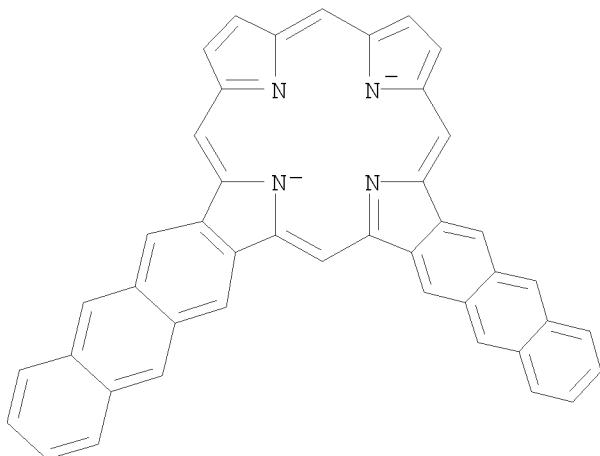


RN 345906-95-8 CAPLUS

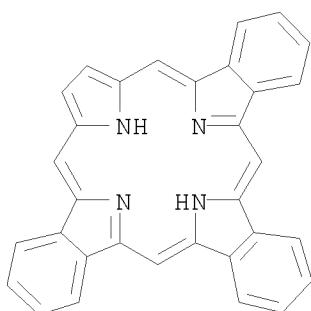
CN 29H,31H-Dinaphtho[2,3-b:2',3'-g]porphine, ion(2-) (9CI) (CA INDEX NAME)



RN 345906-96-9 CAPLUS
CN 33H,35H-Dianthra[2,3-b:2',3'-g]porphine, ion(2-) (9CI) (CA INDEX NAME)



RN 345907-09-7 CAPLUS
CN 28H,30H-Tribenzo[b,g,l]porphine (9CI) (CA INDEX NAME)

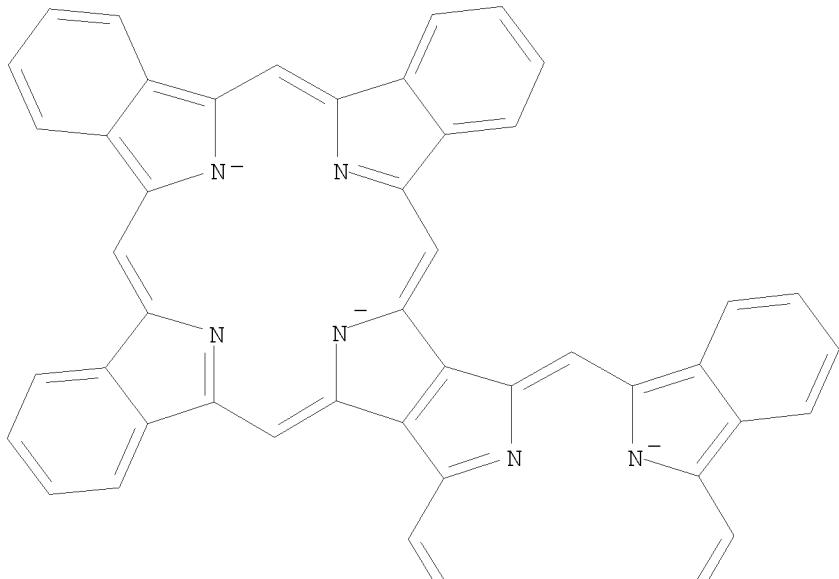


RN 345907-14-4 CAPLUS

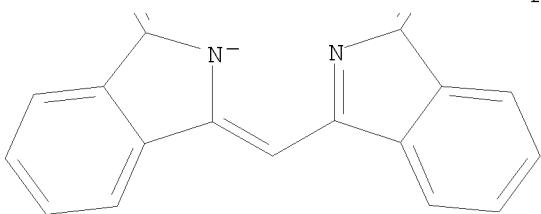
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CN 49H,51H,53H,55H-Tribenzo[b,g,l]tribenzo[7,8:12,13:17,18]porphino[2,3-q]porphine, ion(4-) (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



REFERENCE COUNT: 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 44 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:742739 CAPLUS
DOCUMENT NUMBER: 134:42009
TITLE: Porphyrins with Exocyclic Rings. 15.1 Synthesis of Quino- and Isoquinoporphyrins, Aza Analogues of the Naphthoporphyrins
AUTHOR(S): Lash, Timothy D.; Gandhi, Virajkumar
CORPORATE SOURCE: Department of Chemistry, Illinois State University, Normal, IL, 61790-4160, USA
SOURCE: Journal of Organic Chemistry (2000), 65(23), 8020-8026
CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 134:42009

AB Porphyrins with fused isoquinoline and quinoline units have been prepared by the "3 + 1" methodol. 5-Nitroisoquinoline and 6-nitroquinoline condensed with Et isocyanoacetate in the presence of a phosphazene base to give isoquino- and quinopyrroles, resp. Ester saponification and decarboxylation with

KOH in ethylene glycol at 190 °C gave the parent azatricycles, and these were further condensed with 2 equiv of an acetoxyethylpyrrole to give the corresponding tripyrranes protected at the terminal positions as their tert-Bu esters. In a one-pot procedure, the ester protective groups were cleaved with TFA, and following dilution with dichloromethane, "3 + 1" condensation with a pyrrole dialdehyde and dehydrogenation of the phlorin intermediate with DDQ gave the targeted azanaphthoporphyrins in excellent yields. Although the UV-vis spectra of these new porphyrin systems are unexceptional, they show promise for further functionalization and applications in the development of porphyrin arrays. In addition, a zinc chelate of the isoquinoporphyrin system shows a high degree of regioselective intermol. interaction/aggregation in chloroform solution that may lead to selectivity in mol. recognition studies.

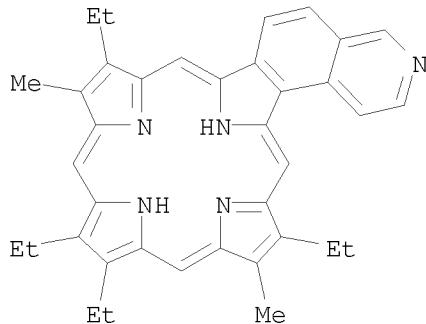
IT 312273-72-6P 312273-73-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(synthesis of quino- and isoquinoporphyrins, aza analogs of the naphthoporphyrins)

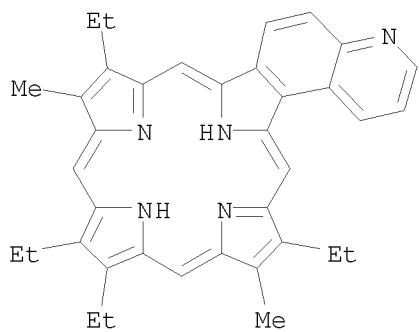
RN 312273-72-6 CAPLUS

CN 25H,27H-Isoquino[5,6-b]porphine, 10,15,16,21-tetraethyl-11,20-dimethyl- (9CI) (CA INDEX NAME)



RN 312273-73-7 CAPLUS

CN 25H,27H-Quino[5,6-b]porphine, 10,15,16,21-tetraethyl-11,20-dimethyl- (CA INDEX NAME)

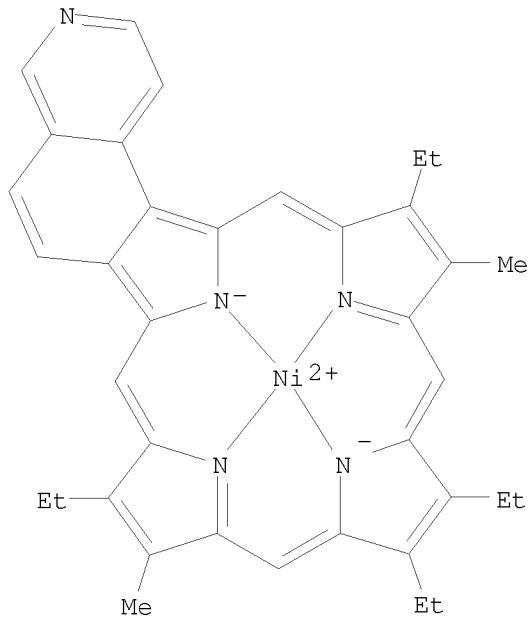


IT 312636-80-9P 312636-81-0P 312636-82-1P
312636-83-2P 312636-84-3P 312636-85-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of quino- and isoquinoporphyrins, aza analogs of the naphthoporphyrins)

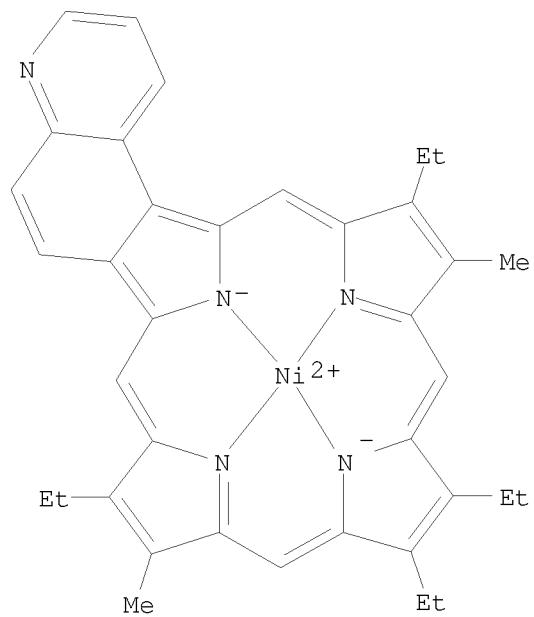
RN 312636-80-9 CAPLUS

CN Nickel, [10,15,16,21-tetraethyl-11,20-dimethyl-25H,27H-isoquino[5,6-b]porphinato(2-)-κN25,κN26,κN27,κN28]-, (SP-4-2)-
(9CI) (CA INDEX NAME)



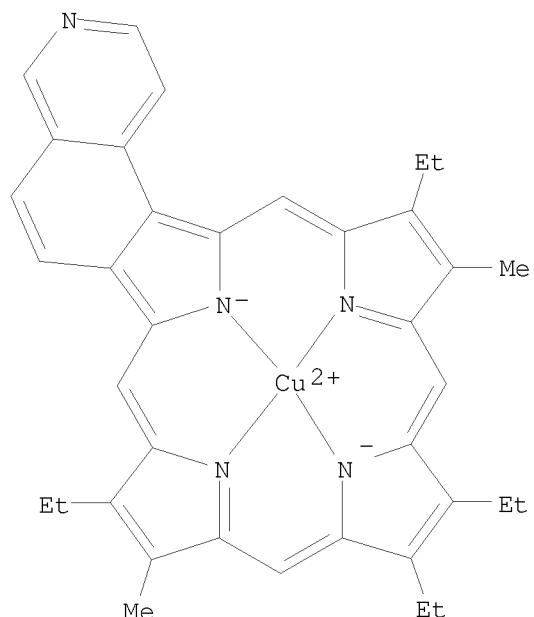
RN 312636-81-0 CAPLUS

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(9CI) (CA INDEX NAME)



RN 312636-82-1 CAPLUS

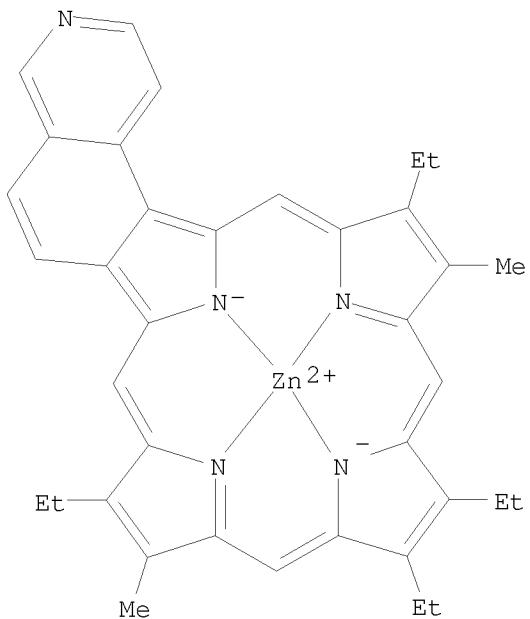
CN Copper, [10,15,16,21-tetraethyl-11,20-dimethyl-25H,27H-isoquino[5,6-b]porphinato(2-)-κN25,κN26,κN27,κN28]-, (SP-4-2)-(9CI) (CA INDEX NAME)



RN 312636-83-2 CAPLUS

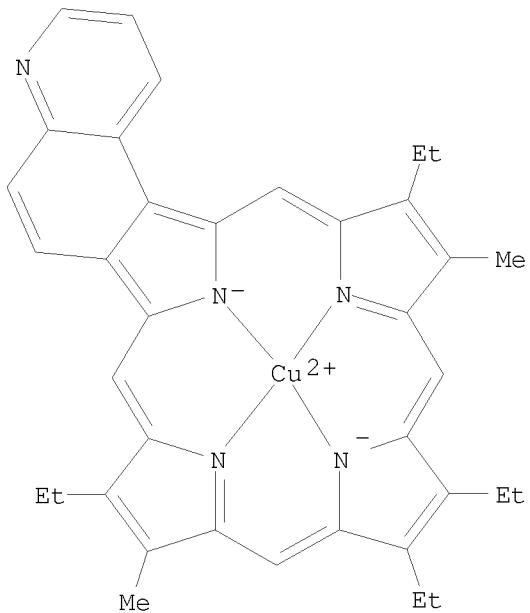
CN Zinc, [10,15,16,21-tetraethyl-11,20-dimethyl-25H,27H-isoquino[5,6-b]porphinato(2-)-κN25,κN26,κN27,κN28]-, (SP-4-2)-

(9CI) (CA INDEX NAME)



RN 312636-84-3 CAPLUS

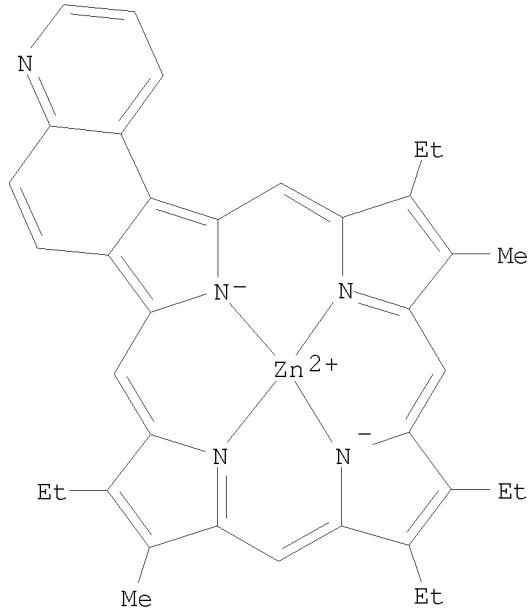
CN Copper, [10,15,16,21-tetraethyl-11,20-dimethyl-25H,27H-quino[5,6-b]porphinato(2-)-κN25,κN26,κN27,κN28]-, (SP-4-2)-
(9CI) (CA INDEX NAME)



RN 312636-85-4 CAPLUS

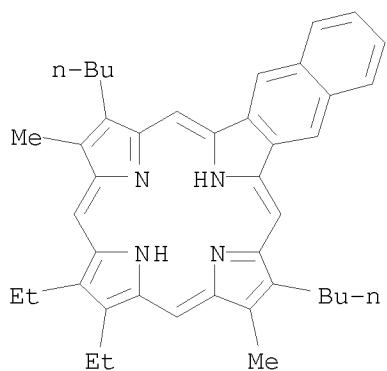
10583126.trn

CN Zinc, [10,15,16,21-tetraethyl-11,20-dimethyl-25H,27H-quino[5,6-b]porphinato(2-)–κN25,κN26,κN27,κN28]–, (SP-4-2)– (9CI) (CA INDEX NAME)



REFERENCE COUNT: 88 THERE ARE 88 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 45 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2000:350663 CAPLUS
 DOCUMENT NUMBER: 133:150401
 TITLE: A new synthesis of [2,3]naphthoporphyrins
 AUTHOR(S): Ito, Satoshi; Ochi, Naoyuki; Murashima, Takashi; Ono, Noboru; Uno, Hidemitsu
 CORPORATE SOURCE: Dep. Chem., Fac. Sci., Ehime University, Matsuyama, Japan
 SOURCE: Chemical Communications (Cambridge) (2000), (11), 893-894
 CODEN: CHCOFS; ISSN: 1359-7345
 PUBLISHER: Royal Society of Chemistry
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 133:150401
 AB A new synthesis of [2,3]naphthoporphyrins using 4,9-ethano-2H-benz[f]isoindole as a synthon of 2H-benz[f]isoindole is described; soluble precursors of [2,3]naphthoporphyrins are converted into insol. [2,3]naphthoporphyrins by simply heating at 290 °C.
 IT 287378-42-1P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (synthesis and UV-VIS data of naphthoporphyrins)
 RN 287378-42-1 CAPLUS
 CN 25H,27H-Naphtho[2,3-b]porphine, 9,20-dibutyl-14,15-diethyl-10,19-dimethyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 46 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:298635 CAPLUS

DOCUMENT NUMBER: 132:339834

TITLE: Distortion and aromatization factors on the complexing ability of tetrapyrrole macrocycles in acetonitrile

AUTHOR(S): Berezin, D. B.; Bazlova, I. Yu.; Malkova, O. V.; Andrianov, V. G.

CORPORATE SOURCE: Ivanovo State Academy of Chemical Technology, Ivanovo, Russia

SOURCE: Russian Journal of Coordination Chemistry (Translation of Koordinatsionnaya Khimiya) (2000), 26(4), 295-299

CODEN: RJCCEY; ISSN: 1070-3284

PUBLISHER: MAIK Nauka/Interperiodica Publishing

DOCUMENT TYPE: Journal

LANGUAGE: English

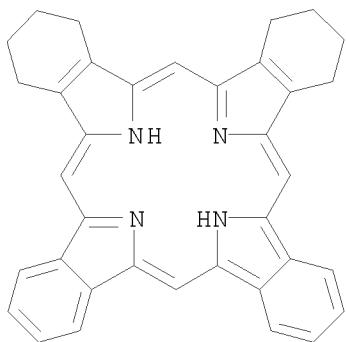
AB The kinetics of complexation between porphyrins and zinc acetate in acetonitrile was studied for the porphyrins belonging to various structural groups, including aza-, benzo-, and distorted N- and multiply substituted macrocycles. The effects of the distortion, on the one hand, and the enhanced rigidity of a macrocycle, on the other, on the complexation process were considered. The coordination of the distorted porphyrins to metal salts is facilitated because of the disturbance of the steric component of the macrocyclic effect (MCE), whereas the complexation of the rigid macrocycles is facilitated because of the activation of the electronic component of MCE.

IT 267889-11-2

RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(distortion and aromatization factors on complexing ability of tetrapyrrole macrocycles in acetonitrile)

RN 267889-11-2 CAPLUS

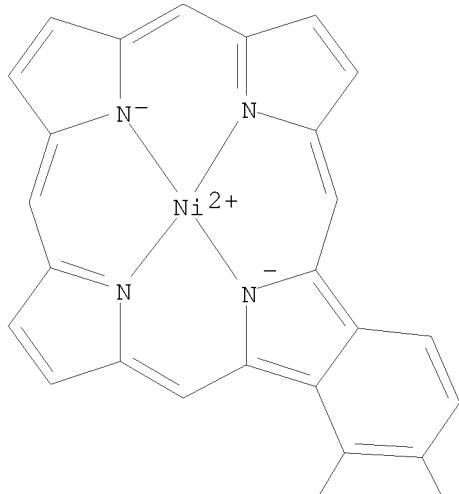
CN 29H,31H-Tetrabenzo[b,g,l,q]porphine, 1,2,3,4,8,9,10,11-octahydro- (9CI)
(CA INDEX NAME)



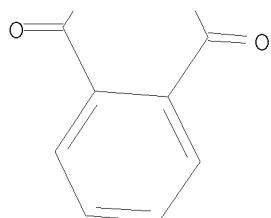
REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 47 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:261510 CAPLUS
DOCUMENT NUMBER: 132:356110
TITLE: Diels-alder reaction of Ni(II)
β-vinyl-meso-tetraphenylporphyrin; a general method for synthesis of functionalized porphyrins
AUTHOR(S): Matsumoto, Kiyoshi; Kimura, Shinya; Morishita, Takuya;
Misumi, Yukihiro; Hayashi, Naoto
CORPORATE SOURCE: Graduate School of Human and Environmental Studies,
Kyoto University, Kyoto, 606-8501, Japan
SOURCE: Synlett (2000), (2), 233-235
CODEN: SYNLES; ISSN: 0936-5214
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Ni(II) β-vinyl-meso-tetraphenylporphyrin underwent Diels-Alder reaction with a variety of dienophiles to give the corresponding porphyrins via 1,3-H shift of the initial adducts in good to moderate yields.
IT 269081-30-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation by Diels Alder reaction of Ni(II)
β-vinyl-meso-tetraphenylporphyrin with dienophiles)
RN 269081-30-3 CAPLUS
CN Nickel, [27H,29H-anthra[1,2-b]porphine-21,26-dionato(2-) -κN27,κN28,κN29,κN30]-, (SP-4-2)- (9CI) (CA INDEX NAME)

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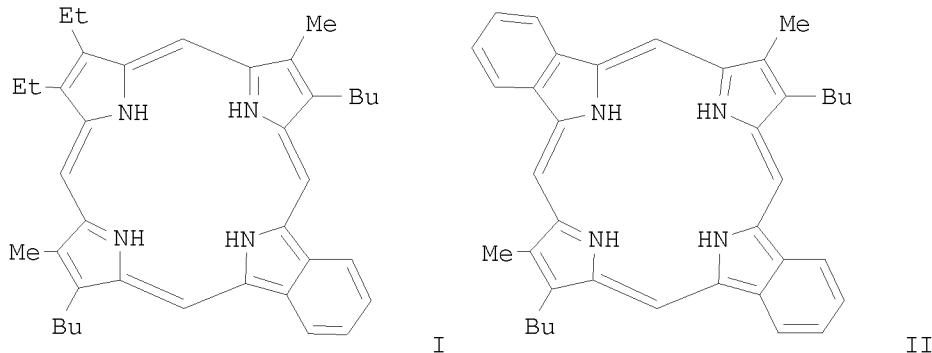
PAGE 2-A



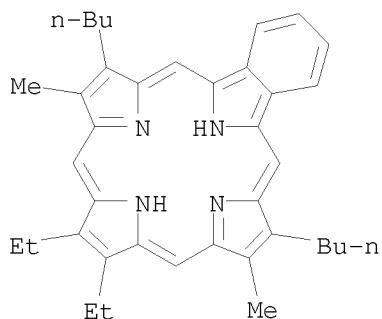
REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 48 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:26820 CAPLUS
DOCUMENT NUMBER: 132:207689
TITLE: A new synthesis of benzoporphyrins using
4,7-dihydro-4,7-ethano-2H-isoindole as an isoindole
equivalent
AUTHOR(S): Ito, Satoshi; Ochi, Naoyuki; Murashima, Takashi; Uno,
Hidemitsu; Ono, Noboru
CORPORATE SOURCE: Department of Chemistry, Faculty of Science, Ehime
University, Matsuyama, 790-8577, Japan
SOURCE: Heterocycles (2000), 52(1), 399-411
CODEN: HTCYAM; ISSN: 0385-5414
PUBLISHER: Japan Institute of Heterocyclic Chemistry

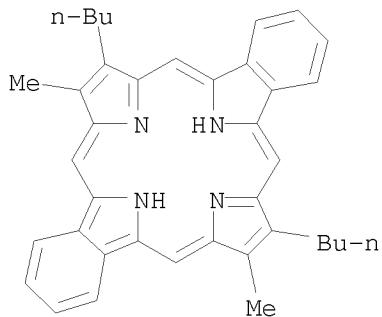
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 132:207689
GI



- AB Various benzoporphyrins and their metal complexes were obtained in 100% yield by heating porphyrins fused with bicyclo[2.2.2]octadiene at 200°C. This thermal (retro Diels-Alder) reaction proceeds very cleanly to give pure monobenzoporphyrins (e.g., I) and dibenzoporphyrins (e.g., II) without further purification
- IT 213920-98-0P 260250-70-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of benzoporphyrins using 4,7-dihydro-4,7-ethano-2H-isoindole as an isoindole equivalent)
- RN 213920-98-0 CAPLUS
- CN 23H,25H-Benzo[b]porphine, 8,19-dibutyl-13,14-diethyl-9,18-dimethyl- (9CI)
(CA INDEX NAME)

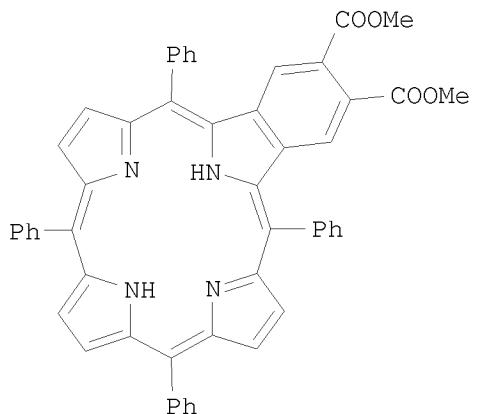


- RN 260250-70-2 CAPLUS
- CN 25H,27H-Dibenzo[b,l]porphine, 8,21-dibutyl-9,20-dimethyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 49 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:777601 CAPLUS
DOCUMENT NUMBER: 132:116635
TITLE: Synthesis and chemistry of new benzoporphyrins
AUTHOR(S): Graca, M.; Vicente, H.; Jaquinod, Laurent; Khouri, Richard G.; Madrona, Acacia Y.; Smith, Kevin M.
CORPORATE SOURCE: Department of Chemistry, University of California, Davis, CA, 95616, USA
SOURCE: Tetrahedron Letters (1999), 40(50), 8763-8766
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
GI

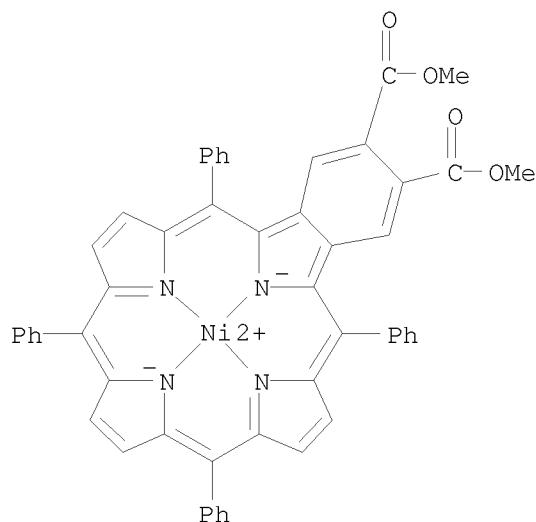


I

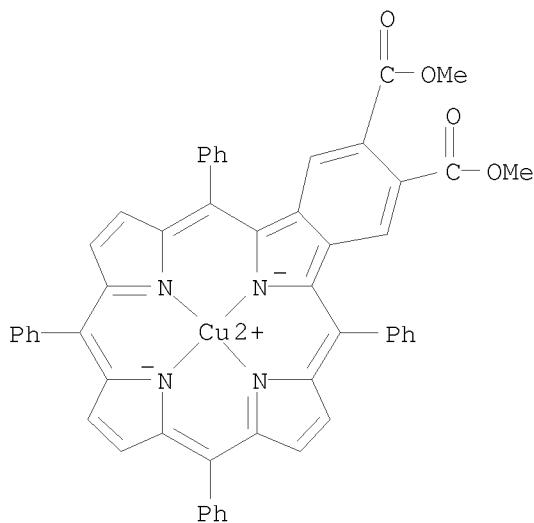
AB ML (H₂L = I) are the major products obtained from the cycloaddn. reactions of ML₁ (M = Cu, Ni; H₂L₁ = 5,10,15,20-tetraphenylpyrrolo[3,4-b]porphine) with di-Me acetylenedicarboxylate. In the presence of excess dienophile a bis-adduct is also obtained which undergoes retro-Diels-Alder reaction to produce CuL. CuL was converted into the 1st reported β -fused benzochlorins and the free-base benzoporphyrin I was regioselectively and

exhaustively brominated.

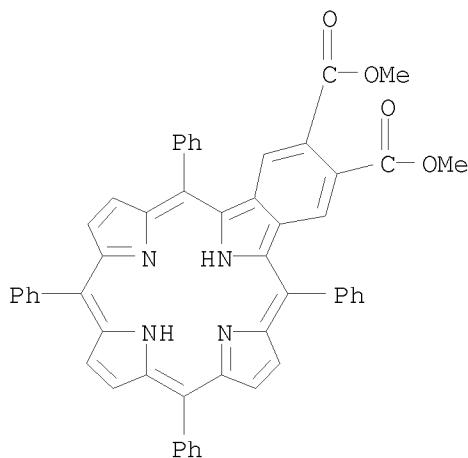
IT 255366-66-6P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and crystal structure of)
RN 255366-66-6 CAPLUS
CN Nickel, [dimethyl 6,11,16,21-tetraphenyl-23H,25H-benzo[b]porphine-2,3-
dicarboxylato(2-)–κN23,κN24,κN25,κN26]–, (SP-4-1)–
(9CI) (CA INDEX NAME)



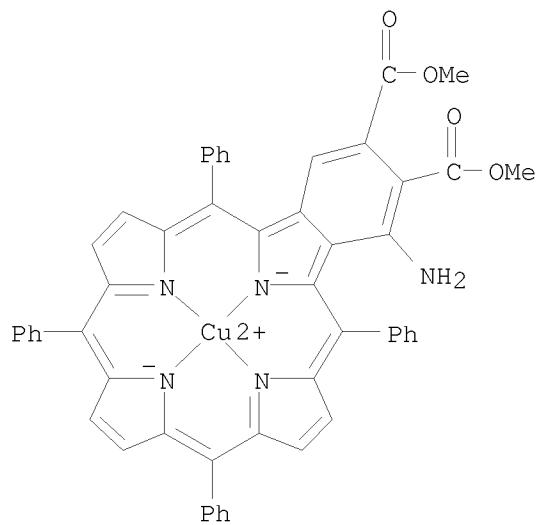
IT 255366-65-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and nitration and demetalation)
RN 255366-65-5 CAPLUS
CN Copper, [dimethyl 6,11,16,21-tetraphenyl-23H,25H-benzo[b]porphine-2,3-
dicarboxylato(2-)–κN23,κN24,κN25,κN26]–, (SP-4-1)–
(9CI) (CA INDEX NAME)



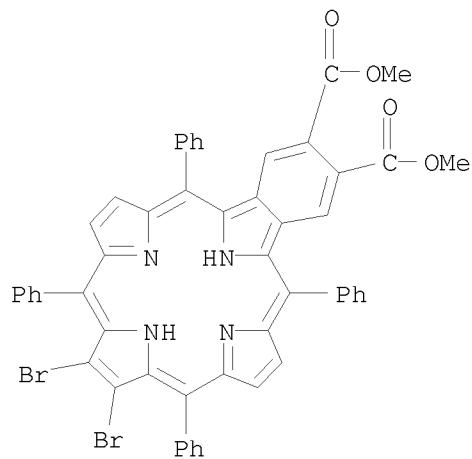
IT 255366-70-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and regioselective and exhaustive bromination)
RN 255366-70-2 CAPLUS
CN 23H,25H-Benzo[b]porphine-2,3-dicarboxylic acid, 6,11,16,21-tetraphenyl-, dimethyl ester (9CI) (CA INDEX NAME)



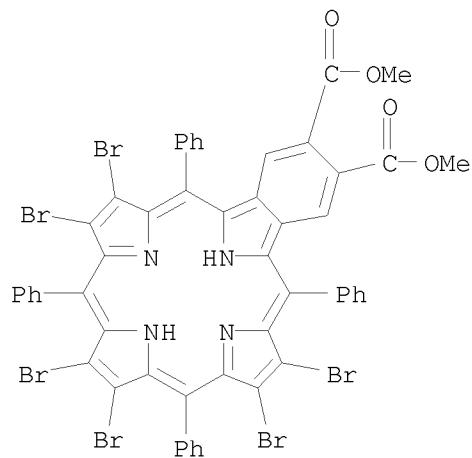
IT 255366-64-4P 255366-71-3P 255366-72-4P
255394-45-7P 255394-46-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 255366-64-4 CAPLUS
CN Copper, [dimethyl 1-amino-6,11,16,21-tetraphenyl-23H,25H-benzo[b]porphine-2,3-dicarboxylato(2-)· κ N23, κ N24, κ N25, κ N26]⁻, (SP-4-2)- (9CI) (CA INDEX NAME)



RN 255366-71-3 CAPLUS
CN 23H,25H-Benzo [b]porphine-2,3-dicarboxylic acid,
13,14-dibromo-6,11,16,21-tetraphenyl-, dimethyl ester (9CI) (CA INDEX
NAME)

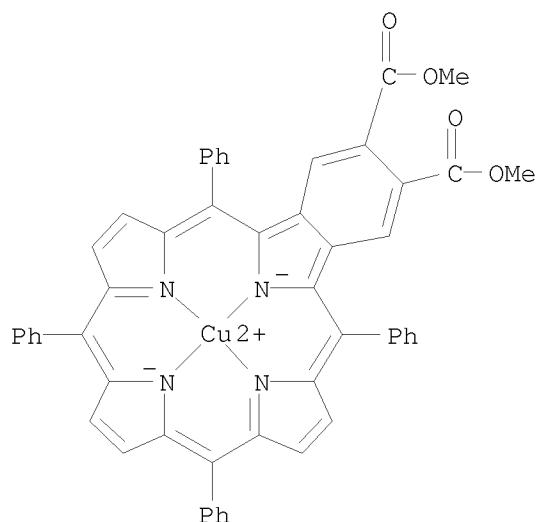


RN 255366-72-4 CAPLUS
CN 23H,25H-Benzo [b]porphine-2,3-dicarboxylic acid,
8,9,13,14,18,19-hexabromo-6,11,16,21-tetraphenyl-, dimethyl ester (9CI)
(CA INDEX NAME)



RN 255394-45-7 CAPLUS

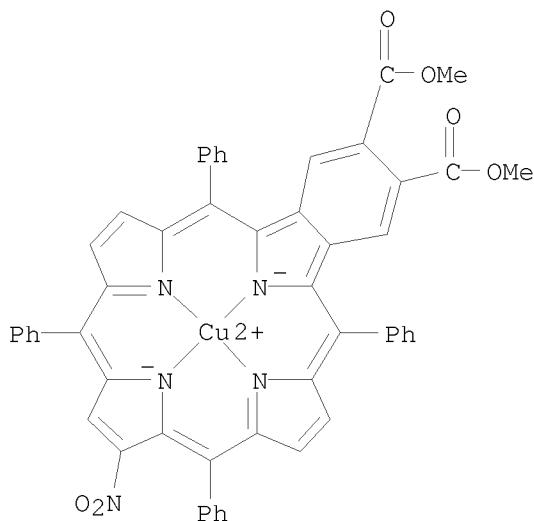
CN Copper, [dimethyl 8(or 9)-nitro-6,11,16,21-tetraphenyl-23H,25H-benzo[b]porphine-2,3-dicarboxylato(2-)-κN23,κN24,κN25,κN26]- (9CI) (CA INDEX NAME)



D1—NO₂

RN 255394-46-8 CAPLUS

CN Copper, [dimethyl 13-nitro-6,11,16,21-tetraphenyl-23H,25H-benzo[b]porphine-2,3-dicarboxylato(2-)-κN23,κN24,κN25,κN26]-, (SP-4-2)- (9CI) (CA INDEX NAME)



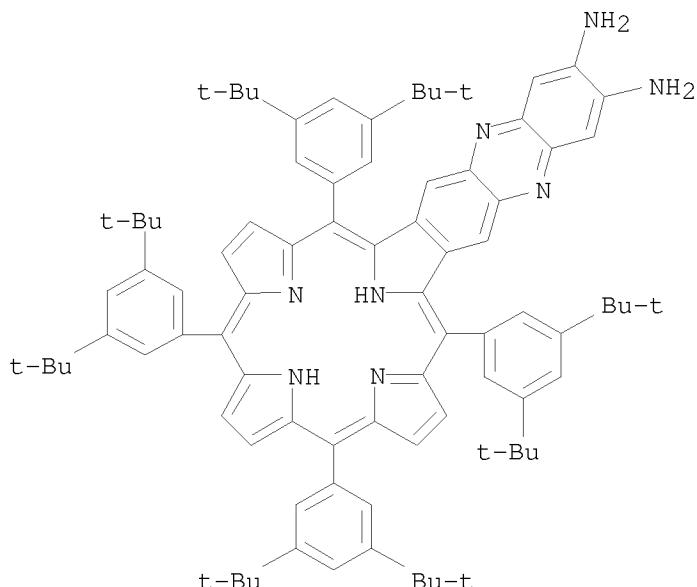
REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 50 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:505595 CAPLUS
DOCUMENT NUMBER: 131:280533
TITLE: Strict geometric control in metalated porphyrin-ligand supramolecular systems
AUTHOR(S): Schultz, Austin C.; Johnston, Martin R.; Warrener, Ronald N.; Gunter, Maxwell J.
CORPORATE SOURCE: Centre for Molecular Architecture, Central Queensland University, Rockhampton, 4702, Australia
SOURCE: ECCHET98: Electronic Conference on Heterocyclic Chemistry, June 29-July 24, 1998 (1998), 331-341.
Editor(s): Rzepa, Henry S.; Kappe, C. Oliver; Leach, Christopher. Imperial College Press: London, UK.
CODEN: 67TSA2
DOCUMENT TYPE: Conference; (computer optical disk)
LANGUAGE: English
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The cycloaddn. ligand delivery reagents 7,8-diazaphencyclone 9 and 3,6-di-(2'-pyridyl)-s-tetrazine 10, were reacted with pre-prepared porphyrin dienophiles, to obtain structurally organized porphyrin-ligand couples I-III. Central to this process was the synthesis of rigid alicyclic BLOCKs, which contained an α -dione and a strained dienophilic π -center, thereby providing the ability to fuse the porphyrin (via porphyrin diamine) and ligand moieties (by cycloaddn.) site specifically onto the spacer framework.
IT 245445-24-3
RL: RCT (Reactant); RACT (Reactant or reagent)

(for preparation of porphyrin-ligand supramol. and its zinc complex)
RN 245445-24-3 CAPLUS
CN 27H,29H-Phenazine[2,3-b]porphine-2,3-diamine,
8,13,18,21-tetrakis[3,5-bis(1,1-dimethylethyl)phenyl]- (9CI) (CA INDEX
NAME)



REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

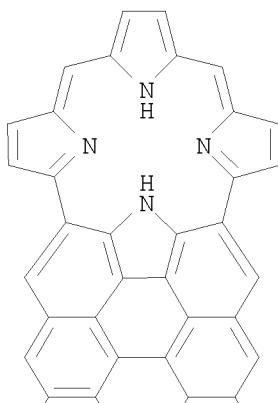
L9 ANSWER 51 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:304475 CAPLUS
DOCUMENT NUMBER: 131:52446
TITLE: Rigid Fused Oligoporphyrins as Potential Versatile Molecular Wires. 2. B3LYP and SCF Calculated Geometric and Electronic Properties of 98 Oligoporphyrin and Related Molecules
AUTHOR(S): Reimers, Jeffrey R.; Hall, Lachlan E.; Crossley, Maxwell J.; Hush, Noel. S.
CORPORATE SOURCE: School of Chemistry and Department of Biochemistry, University of Sydney, Sydney, NSW 2006, Australia
SOURCE: Journal of Physical Chemistry A (1999), 103(22), 4385-4397
CODEN: JPCAFH; ISSN: 1089-5639
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB To examine their basic operational principles and to explore synthetic possibilities, the authors optimize the geometry of 85 oligoporphyrin and related mols. including porphyrin dimers and trimers using the accurate B3LYP d.-functional technique; Also, a scheme is developed by which accurate geometries of oligoporphyrins of arbitrary size can be estimated, and this is applied to determine the geometries of a further 13 porphyrin trimers and tetramers. At these geometries the authors analyze SCF orbital

properties to determine the superexchange electronic couplings within the oligoporphyrins. Couplings were monitored for bridge-length dependence and interpreted in terms of a detailed description involving bridge-porphyrin orbital resonances, as well as in terms of a simpler picture in which π -electron delocalization is seen as a prerequisite for strong intramol. coupling. Variations of the coupling with the nature of the bridge (e.g., naphthalene, anthracene, free-base or protonated 1,4,5,8-tetraazaanthracene, tetracene, pyrene, coronene, biphenylene, dicyclobuta[a,d]benzene, dicyclobuta[b,g]naphthalene, dicyclobuta[b,h]biphenylene, and bridges addnl. fused to porphyrin meso positions) and porphyrin (e.g., porphyrin or bacteriochlorin, β -substituents such as methoxy and cyano, Mg, Zn, Ru(CO)₂, and free-base porphyrins) units are considered, and the phys. origin of quinonoid switching is determined. Terminal alligator clips such as fused phenanthroline, here complexed with CuICl₂, are also considered.

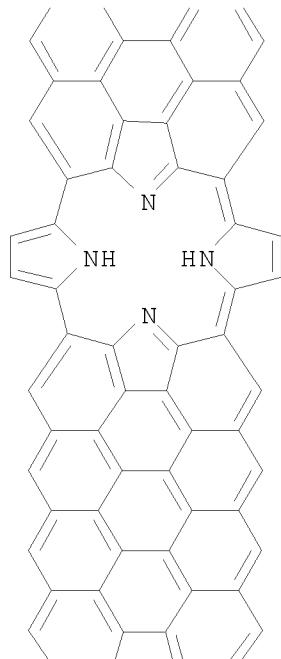
IT 227204-54-8 227204-55-9 227204-56-0
227204-67-3 227204-68-4 227204-70-8
227204-73-1 227204-74-2 227204-75-3
227204-77-5, 33H,35H-Dianthra[2,3-b:2',3'-l]porphine
227204-81-1 227204-87-7 227204-88-8
227312-50-7 227312-52-9 227312-54-1
227312-55-2
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(B3LYP and SCF Calculated Geometric and Electronic Properties of Oligoporphyrin and Related Mols. for mol. wires)

RN 227204-54-8 CAPLUS
CN 2,4:19,21:24,26:31,33:36,38:55,53:60,58:65,67-Octametheno-70H,72H,74H,76H,77H,79H-bisporphino[2',3':7,8]coroneno[1,2-b:1',2'-1]porphine (9CI) (CA INDEX NAME)

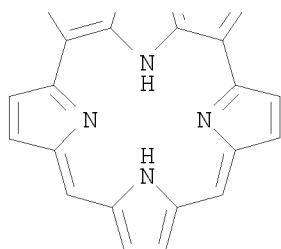
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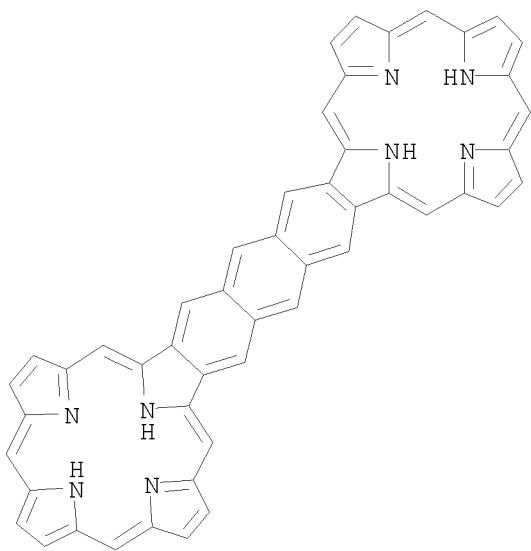
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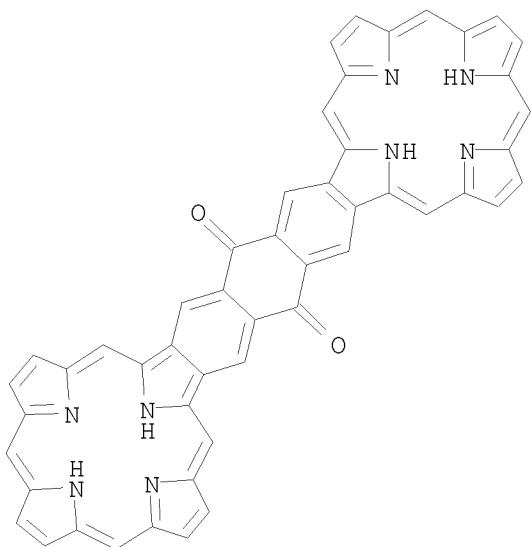
PAGE 3-A



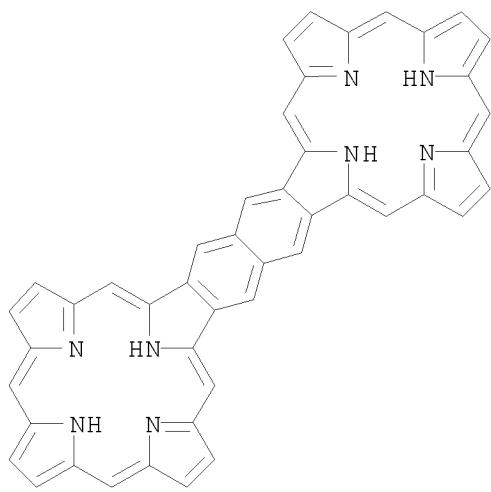
RN 227204-55-9 CAPLUS
CN 43H,45H,47H,49H-Anthra[2,3-b:6,7-b']diporphine (9CI) (CA INDEX NAME)



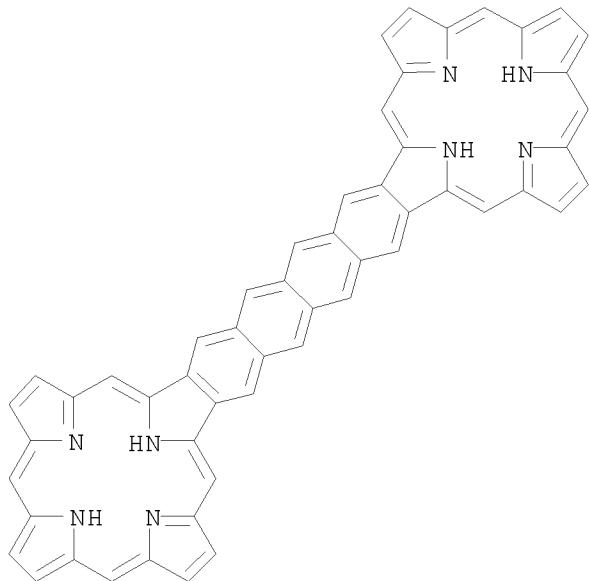
RN 227204-56-0 CAPLUS
CN 43H, 45H, 47H, 49H-Anthra[2,3-b:6,7-b']diporphine-20,41-dione (9CI) (CA INDEX NAME)



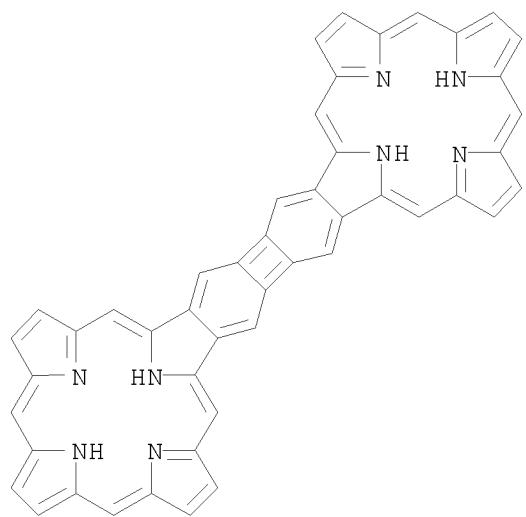
RN 227204-67-3 CAPLUS
CN 41H, 43H, 45H, 47H-Naphtho[2,3-b:6,7-b']diporphine (9CI) (CA INDEX NAME)



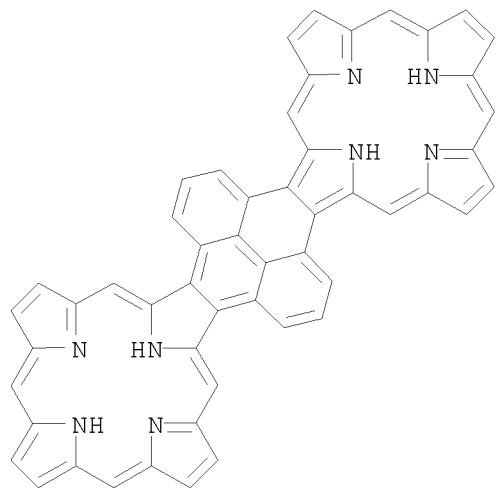
RN 227204-68-4 CAPLUS
CN 45H, 47H, 49H, 51H-Naphthaceno[2,3-b:8,9-b']diporphine (9CI) (CA INDEX NAME)



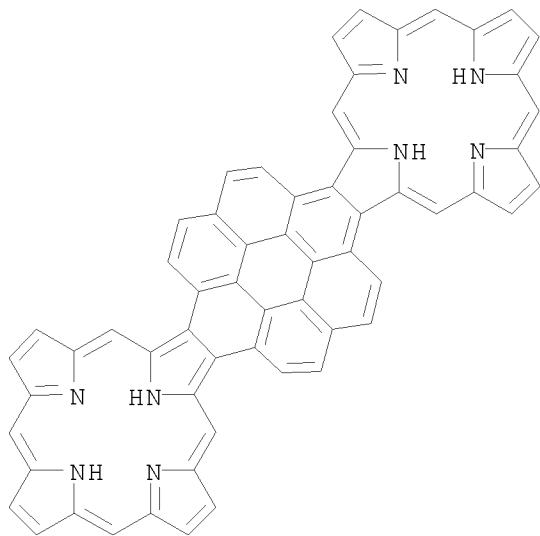
RN 227204-70-8 CAPLUS
CN 41H, 43H, 45H, 47H-Biphenyleneo[2,3-b:6,7-b']diporphine (9CI) (CA INDEX NAME)



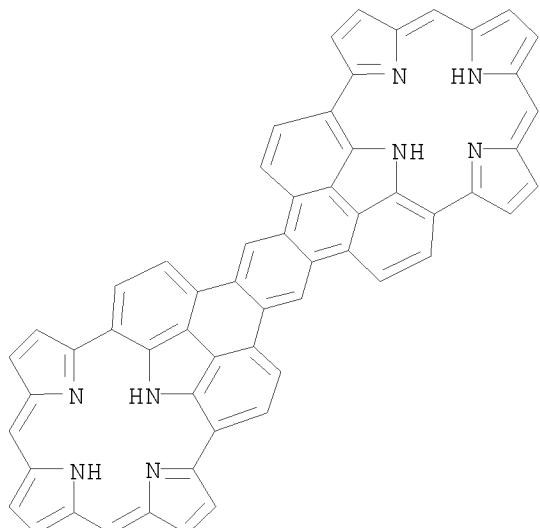
RN 227204-73-1 CAPLUS
CN 43H,45H,47H,49H-Pyreno[4,5-b:9,10-b']diporphine (9CI) (CA INDEX NAME)



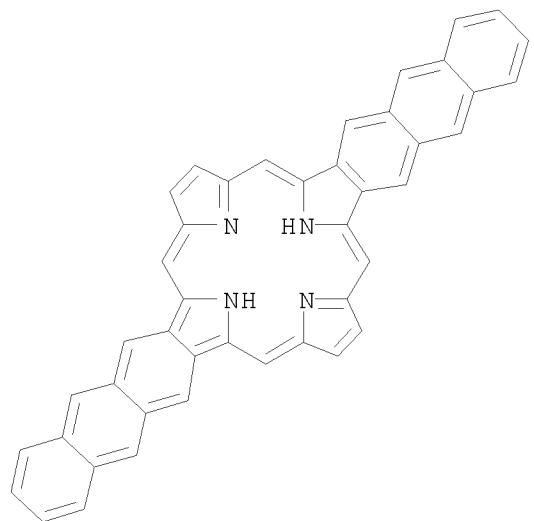
RN 227204-74-2 CAPLUS
CN 45H,47H,49H,51H-Coroneno[1,2-b:7,8-b']diporphine (9CI) (CA INDEX NAME)



RN 227204-75-3 CAPLUS
CN 2,42:17,19:21,23:38,40-Tetraetheno-43H,45H,47H,49H-anthra[2,3-b:6,7-b']diporphine (9CI) (CA INDEX NAME)



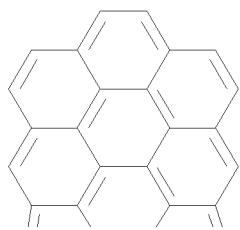
RN 227204-77-5 CAPLUS
CN 33H,35H-Dianthra[2,3-b:2',3'-l]porphine (9CI) (CA INDEX NAME)



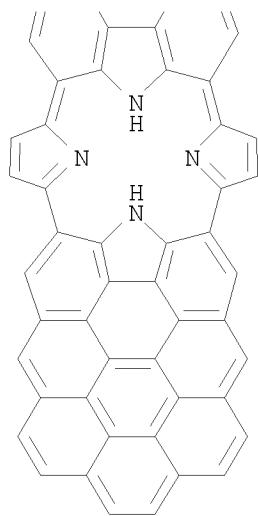
RN 227204-81-1 CAPLUS

CN 8,10:15,17:26,28:33,35-Tetrametheno-37H,39H-dicoroneno[1,2-b:1',2'-l]porphine (9CI) (CA INDEX NAME)

PAGE 1-A

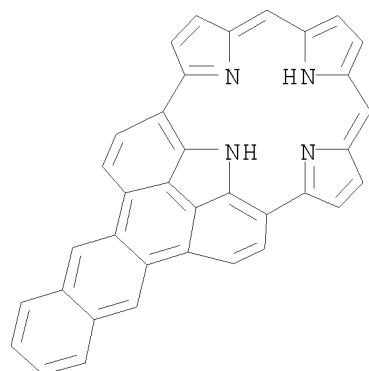


PAGE 2-A



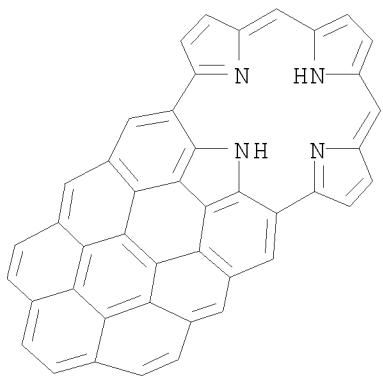
RN 227204-87-7 CAPLUS

CN 6,8:23,25-Dietheno-27H,29H-anthra[2,3-b]porphine (9CI) (CA INDEX NAME)



RN 227204-88-8 CAPLUS

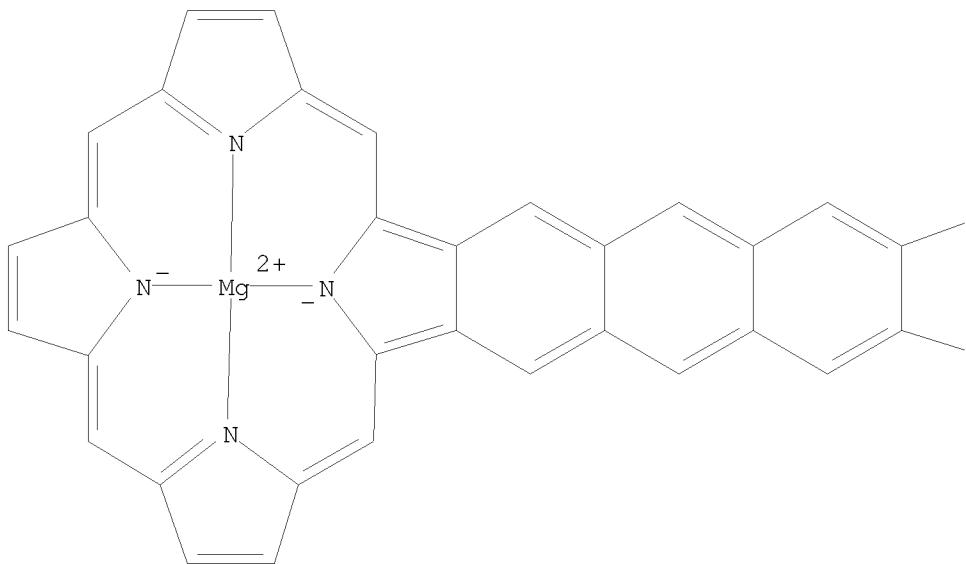
CN 8,10:25,27-Dimetheno-29H,31H-coroneno[1,2-b]porphine (9CI) (CA INDEX NAME)



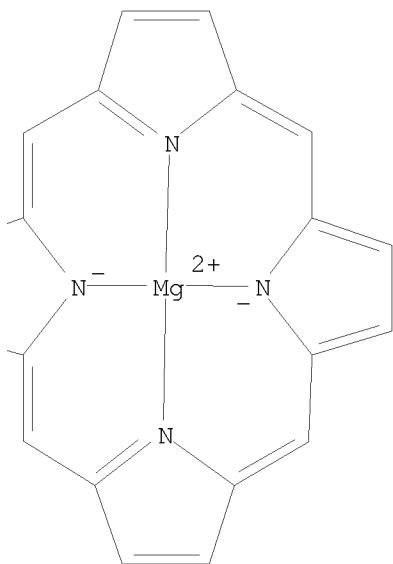
RN 227312-50-7 CAPLUS

CN Magnesium, [μ-[43H, 45H, 47H, 49H-anthra[2,3-b:6,7-b']diporphinato(4-) -κN43, κN44, κN45, κN46:κN47, κN48, κN49, κN50]di- (9CI) (CA INDEX NAME)

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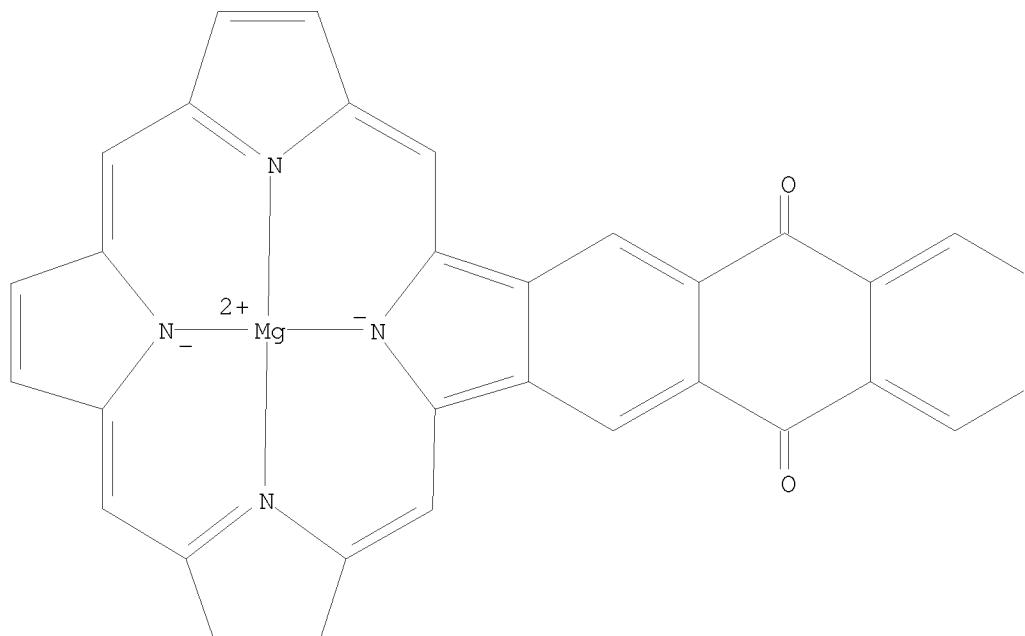
PAGE 1-B



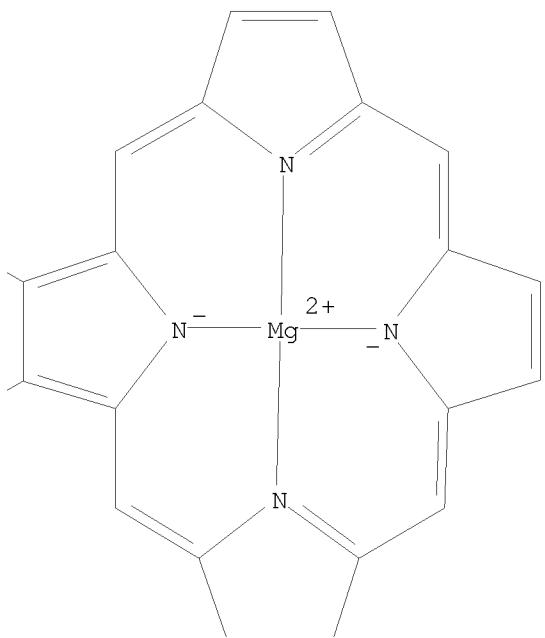
RN 227312-52-9 CAPLUS

CN Magnesium, [μ -[43H, 45H, 47H, 49H-anthra[2,3-b:6,7-b']diporphine-20,41-dionato(4-) - κ N43, κ N44, κ N45, κ N46: κ N47, κ N48, κ N49, κ N50]di- (9CI) (CA INDEX NAME)

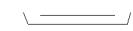
PAGE 1-A



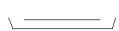
PAGE 1-B



PAGE 2-A

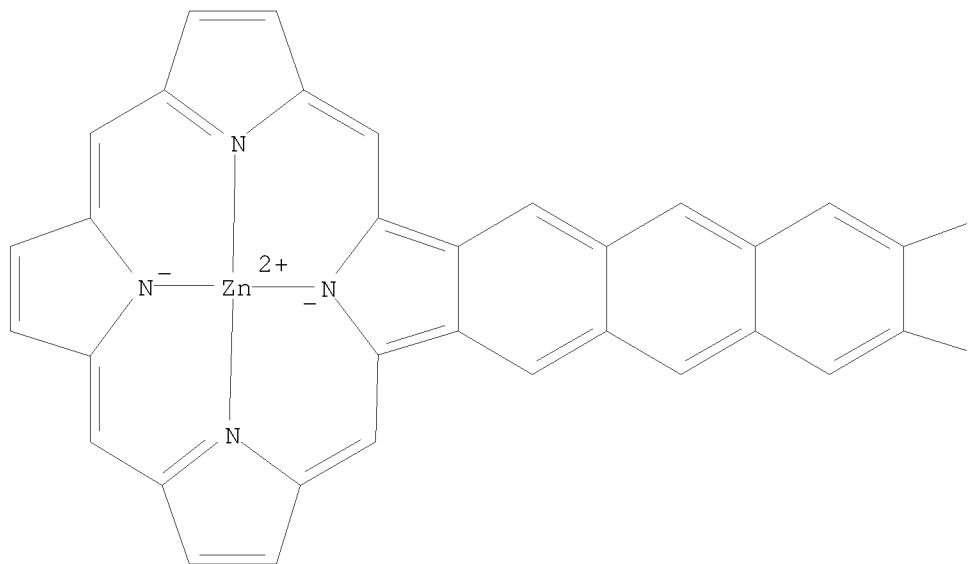


PAGE 2-B

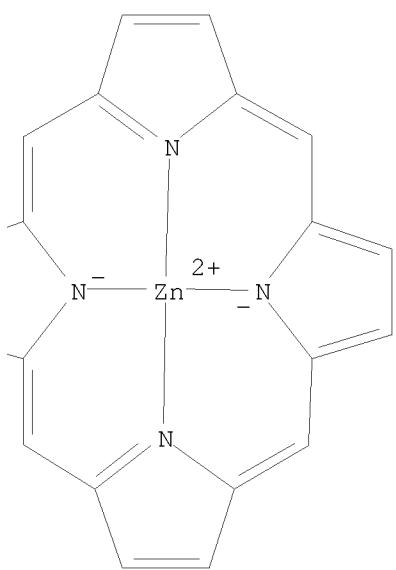


RN 227312-54-1 CAPLUS
CN Zinc, [μ -[43H, 45H, 47H, 49H-anthra[2,3-b:6,7-b']diporphinato(4-) -
 κ N43, κ N44, κ N45, κ N46: κ N47, κ N48, κ N
49, κ N50]]di- (9CI) (CA INDEX NAME)

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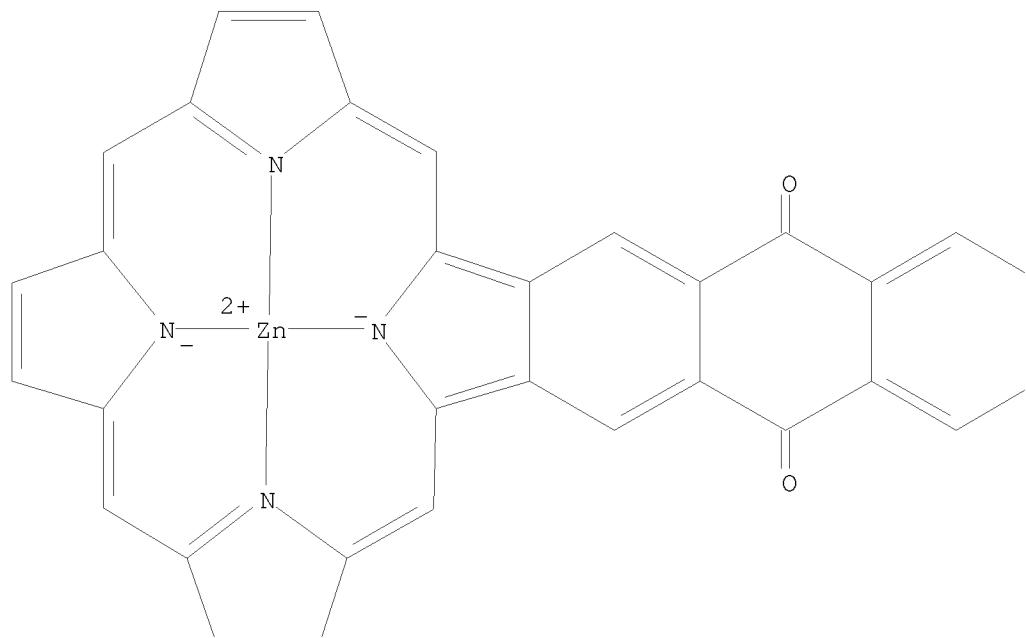


PAGE 1-B

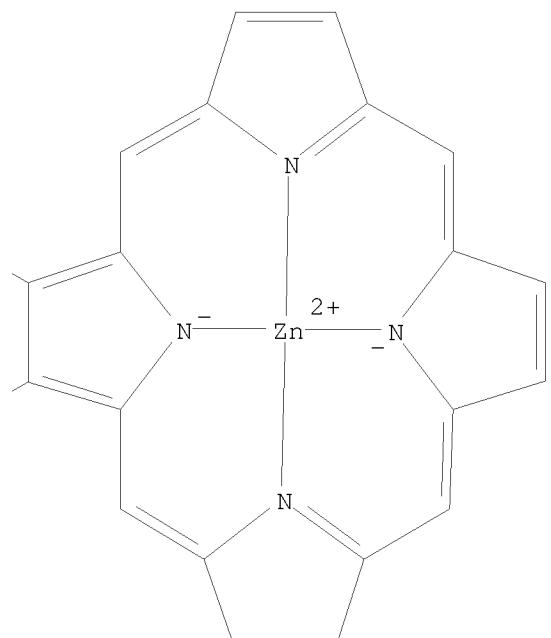


RN 227312-55-2 CAPLUS
CN Zinc, [μ -[43H, 45H, 47H, 49H-anthra[2,3-b:6,7-b']diporphine-20,41-dionato(4-) - κ N43, κ N44, κ N45, κ N46: κ N47, κ N48, κ N49, κ N50]di- (9CI) (CA INDEX NAME)

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PAGE 1-B



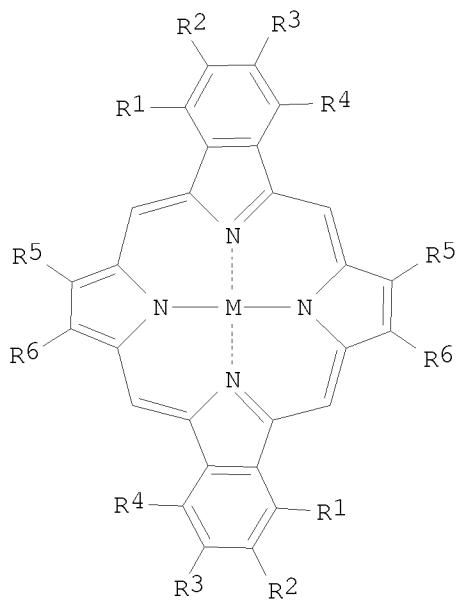
PAGE 2-A

PAGE 2-B

REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 52 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:142144 CAPLUS
DOCUMENT NUMBER: 130:230045
TITLE: Optical recording media containing porphyrin compound
INVENTOR(S): Tsukahara, Hiroshi; Misawa, Tsutami; Sugimoto, Kenichi; Nishimoto, Taizo; Tsuda, Takeshi; Umehara, Hideki; Takuma, Keisuke
PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan; Yamamoto Chemicals Inc.
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11058955	A	19990302	JP 1997-223869	19970820
JP 3704230	B2	20051012		
PRIORITY APPLN. INFO.:			JP 1997-223869	19970820
OTHER SOURCE(S):	MARPAT	130:230045		
GI				



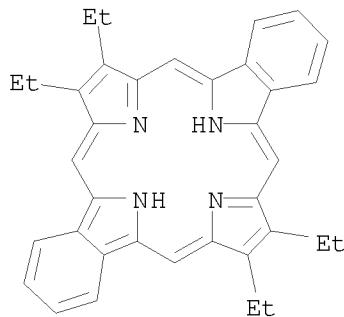
AB The media have a recording layer containing a porphyrin compound I ($R1-6 = H$, halogen, C1-20 alkyl, alkoxy, alkylthio, aryloxy, arylthio, alkenyl, aralkyl, acyl, aryl; M = two H atoms, divalent metal, tri or tetra valent metal derivative) and a reflection layer on a substrate. The media are useful for recording and rewriting information using laser beam with wavelength 400-500 nm.

IT 160389-03-7 221109-67-7 221109-68-8
221109-69-9 221109-70-2 221109-71-3
221109-72-4 221109-73-5 221109-74-6
221109-75-7

RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(optical recording media containing porphyrin compound)

RN 160389-03-7 CAPLUS

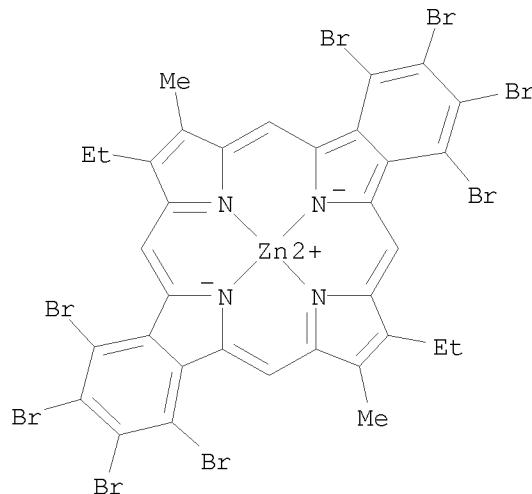
CN 25H,27H-Dibenzo[*b*,*l*]porphine, 8,9,20,21-tetraethyl- (9CI) (CA INDEX NAME)



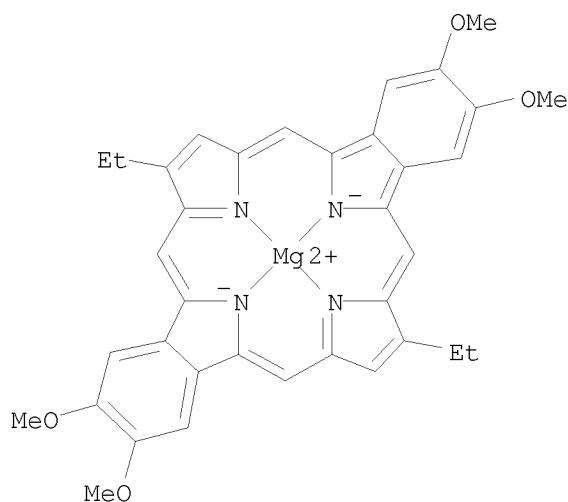
RN 221109-67-7 CAPLUS

CN Zinc, [1,2,3,4,13,14,15,16-octabromo-8,20-diethyl-9,21-dimethyl-25H,27H-

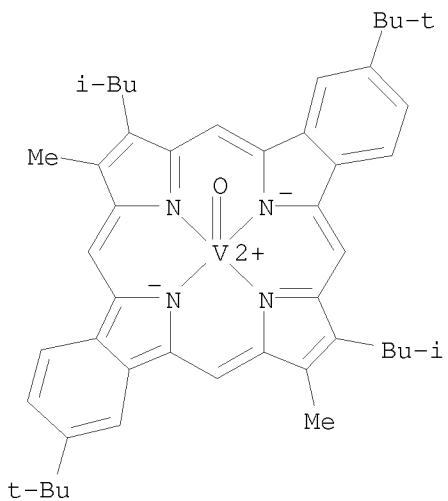
dibenzo[*b,1*]porphinato(2-)–κN25, κN26, κN27, κN28]–,
(SP-4-1)– (9CI) (CA INDEX NAME)



RN 221109-68-8 CAPLUS
CN Magnesium, [8,20-diethyl-2,3,14,15-tetramethoxy-25H,27H-dibenzo[*b,1*]porphinato(2-)–κN25, κN26, κN27, κN28]–,
(SP-4-1)– (9CI) (CA INDEX NAME)

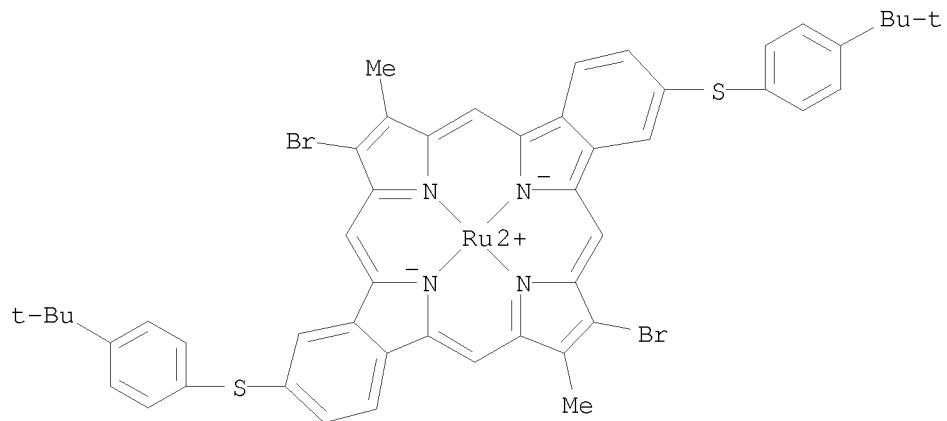


RN 221109-69-9 CAPLUS
CN Vanadium, [2,14-bis(1,1-dimethylethyl)-9,20-dimethyl-8,21-bis(2-methylpropyl)-25H,27H-dibenzo[*b,1*]porphinato(2-)–κN25, κN26, κN27, κN28]oxo–, (SP-5-12)– (9CI) (CA INDEX NAME)



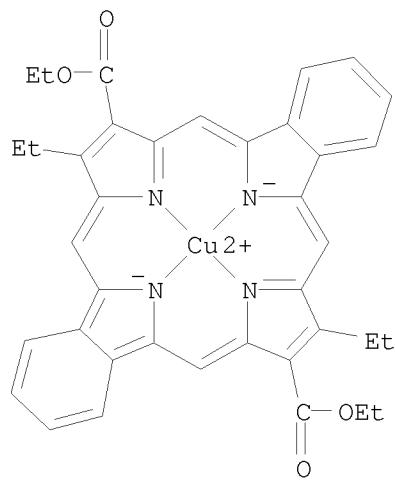
RN 221109-70-2 CAPLUS

CN Ruthenium, [9,21-dibromo-2,14-bis[4-(1,1-dimethylethyl)phenyl]thio]-8,20-dimethyl-25H,27H-dibenzo[b,l]porphinato(2-) -κN25,κN26,κN27,κN28]-, (SP-4-1)- (9CI) (CA INDEX NAME)

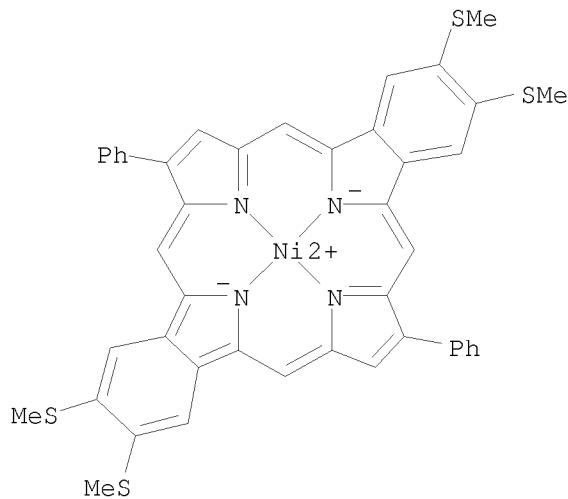


RN 221109-71-3 CAPLUS

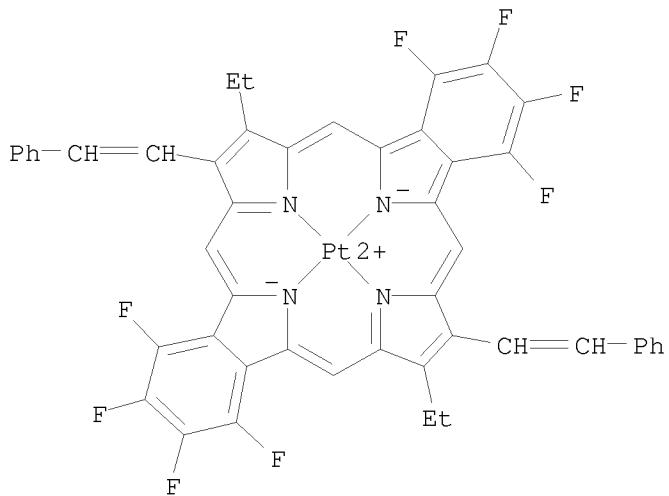
CN Copper, [diethyl 9,21-diethyl-25H,27H-dibenzo[b,l]porphine-8,20-dicarboxylato(2-) -κN25,κN26,κN27,κN28]-, (SP-4-1)- (9CI) (CA INDEX NAME)



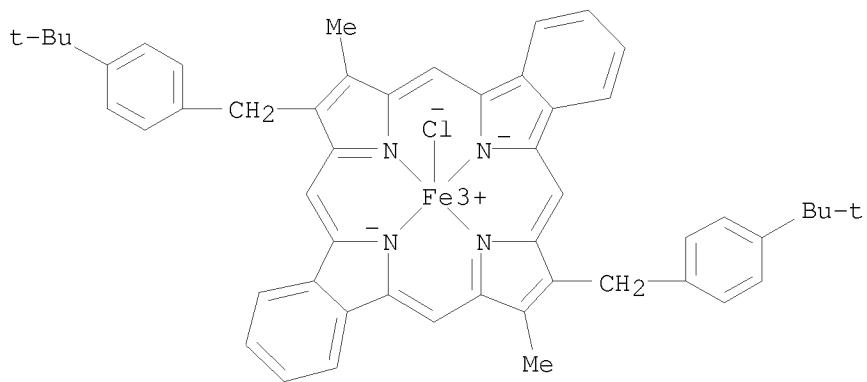
RN 221109-72-4 CAPLUS
CN Nickel, [2,3,14,15-tetrakis(methylthio)-8,20-diphenyl-25H,27H-dibenzo[b,l]porphinato(2-)-κN25,κN26,κN27,κN28]-, (SP-4-1)- (9CI) (CA INDEX NAME)



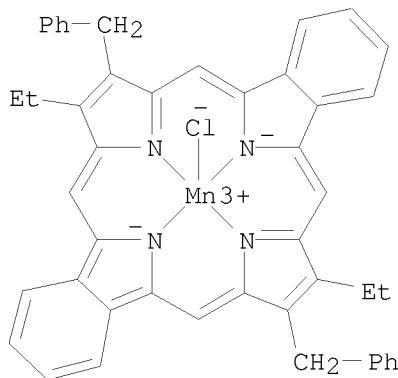
RN 221109-73-5 CAPLUS
CN Platinum, [8,20-diethyl-1,2,3,4,13,14,15,16-octafluoro-9,21-bis(2-phenylethenyl)-25H,27H-dibenzo[b,l]porphinato(2-)-κN25,κN26,κN27,κN28]-, (SP-4-1)- (9CI) (CA INDEX NAME)



RN 221109-74-6 CAPLUS
CN Iron, [8,20-bis[4-(1,1-dimethylethyl)phenyl]methyl]-9,21-dimethyl-25H,27H-dibenzo[b,l]porphinato(2-)-κN25,κN26,κN27,κN28]chloro-, (SP-5-12)- (9CI) (CA INDEX NAME)



RN 221109-75-7 CAPLUS
CN Manganese, chloro[8,20-diethyl-9,21-bis(phenylmethyl)-25H,27H-dibenzo[b,l]porphinato(2-)-κN25,κN26,κN27,κN28]-, (SP-5-12)- (9CI) (CA INDEX NAME)



L9 ANSWER 53 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:783175 CAPLUS

DOCUMENT NUMBER: 130:124921

TITLE: Vic-diacrylic ester porphyrins as starting materials for monobenzoporphyrin and opp-dibenzoporphyrin synthesis

AUTHOR(S): Boudif, Arezki; Gimenez, Sandrine; Loock, Bernard; Momenteau, Michel

CORPORATE SOURCE: Department of Chemistry, The University of Iowa, Iowa City, IA, 52242-1294, USA

SOURCE: Canadian Journal of Chemistry (1998), 76(8), 1215-1219
CODEN: CJCHAG; ISSN: 0008-4042

PUBLISHER: National Research Council of Canada

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 130:124921

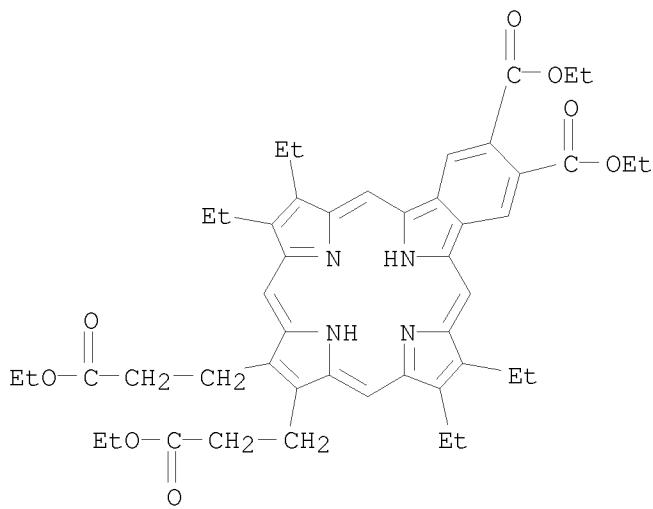
AB Synthesis of a bis(vic-diacrylic ester) porphyrin using the "3+1" methodol. is described. A two-step procedure is used to convert the vic-diacrylic ester porphyrin and the bis(vic-diacrylic ester) porphyrin to the monobenzoporphyrin and the opp-dibenzoporphyrin, resp. Characterization of the compds. by ¹H NMR and UV-visible spectroscopies is also discussed.

IT 219858-55-6P 219858-56-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of monobenzoporphyrin and opp-dibenzoporphyrin starting from vic-diacrylic ester porphyrins)

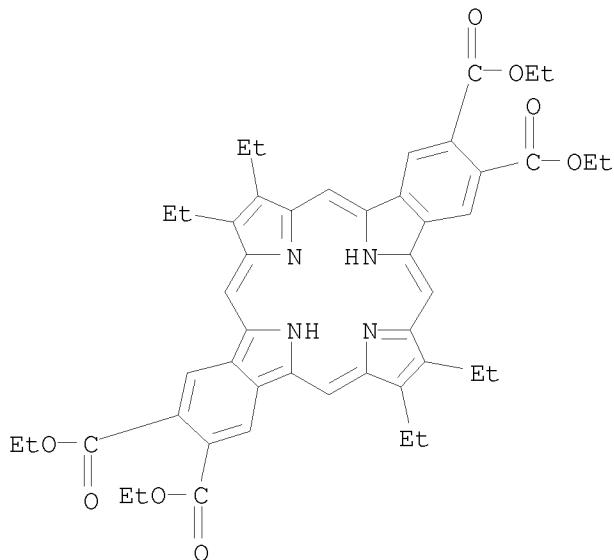
RN 219858-55-6 CAPLUS

CN 23H,25H-Benz[b]porphine-13,14-dipropanoic acid,
2,3-bis(ethoxycarbonyl)-8,9,18,19-tetraethyl-, diethyl ester (9CI) (CA
INDEX NAME)



RN 219858-56-7 CAPLUS

CN 25H,27H-Dibenzo[b,l]porphine-2,3,14,15-tetracarboxylic acid,
8,9,20,21-tetraethyl-, tetraethyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

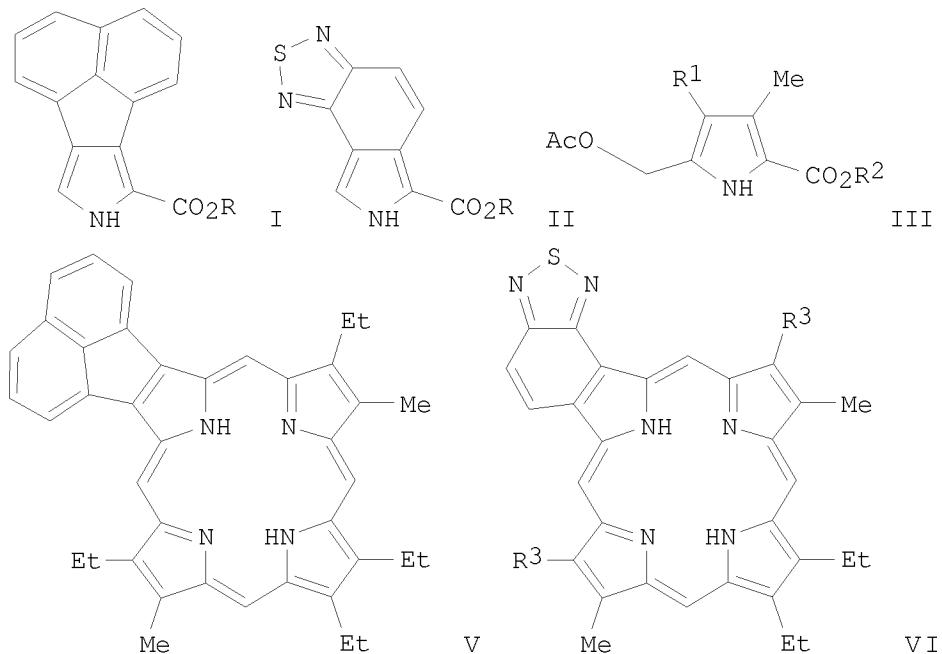
L9 ANSWER 54 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:669189 CAPLUS

DOCUMENT NUMBER: 130:52257

TITLE: Porphyrins with Exocyclic Rings. 13. Synthesis and Spectroscopic Characterization of Highly Modified Porphyrin Chromophores with Fused Acenaphthylene and

AUTHOR(S): Lash, Timothy D.; Chandrasekar, Pushpa; Osuma, Augustine T.; Chaney, Sun T.; Spence, John D.
 CORPORATE SOURCE: Department of Chemistry, Illinois State University, Normal, IL, 61790-4160, USA
 SOURCE: Journal of Organic Chemistry (1998), 63(23), 8455-8469
 CODEN: JOCEAH; ISSN: 0022-3263
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 130:52257
 GI



AB As part of a survey on the influence of fused aromatic rings on the porphyrin chromophore, a series of novel structures with fused acenaphthylene or benzothiadiazole rings have been synthesized. Base-catalyzed condensation of 1-nitroacenaphthylene or 4-nitrobenzothiadiazole with esters of isocyanoacetic acid afforded good yields of the annelated pyrroles (I) ($R = Et, CMe_3, CH_2Ph$) and (II) ($R = Et, CMe_3$). Cleavage of the ester moieties with KOH in refluxing ethylene glycol gave the unsubstituted heterocycles, and subsequent condensation with 2 equiv of acetoxyethylpyrroles (III) ($R_1 = Et, CH_2CH_2CO_2Me; R_2 = CMe_3, Et, Ch_2Ph$) in acetic acid/ethanol produced the modified tripyrranes. Tripyrranes with terminal tert-Bu ester units were treated with TFA and condensed with 3,4-diethyl-2,5-pyrroledicarboxaldehyde (IV) in dichloromethane to give, following oxidation with DDQ, the corresponding π -extended porphyrins (V) and (VI) ($R_3 = Et, CH_2CH_2CO_2Me$). Acenaphthoporphyrins V showed unique UV-vis spectra with a triply split Soret band region and a relatively

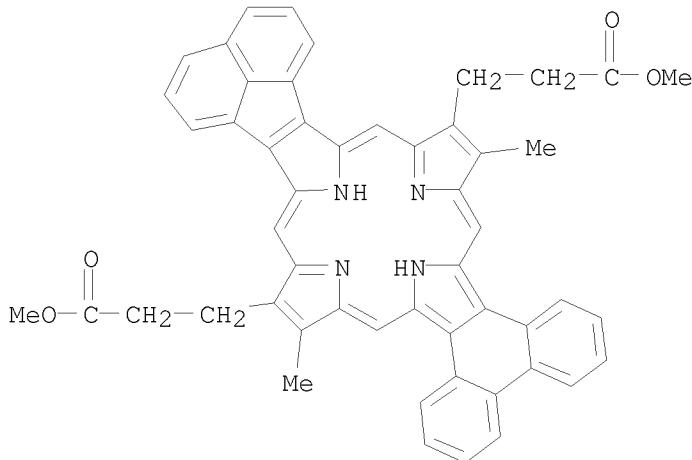
strong band near 660 nm. Strongly red-shifted absorptions were also noted for the dications and the nickel(II), copper(II), and zinc chelates for this system. Thiadiazoloporphyrins VI gave two broadened Soret bands, but the Q-band region was unexceptional. However, the nickel(II), copper(II), and zinc complexes all showed abnormally strong absorptions between 600 and 612 nm. Porphyrins with two antipodal fused aromatic rings were easily prepared by condensing c-annelated pyrrolealdehydes with tripyrranes and the spectroscopic properties of the resulting porphyrins showed that the observed ring-fusion effects were essentially additive. Porphyrins with two adjacent acenaphthylene rings were also prepared by the MacDonald "2 + 2" condensation, although this chemical gave poor results in the synthesis of a porphyrin with two fused benzothiadiazole rings. The spectroscopic properties of these new highly conjugated porphyrin structures show that ring fusion can profoundly modify the porphyrin chromophore.

IT 180199-09-1P 217302-11-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (synthesis and spectroscopic characterization of highly modified
 porphyrin chromophores with fused acenaphthylene and benzothiadiazole
 rings)

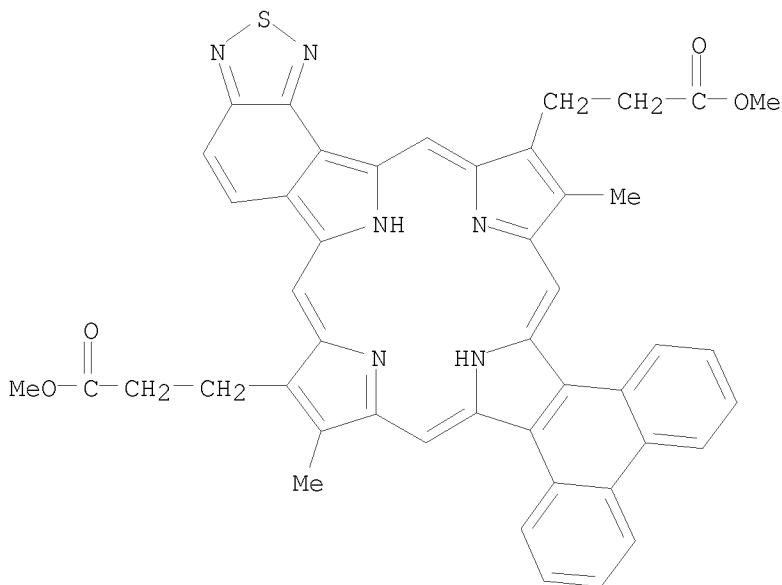
RN 180199-09-1 CAPLUS

CN 31H,33H-Acenaphtho[1,2-b]phenanthro[9,10-1]porphine-13,26-dipropanoic
 acid, 12,27-dimethyl-, dimethyl ester (9CI) (CA INDEX NAME)



RN 217302-11-9 CAPLUS

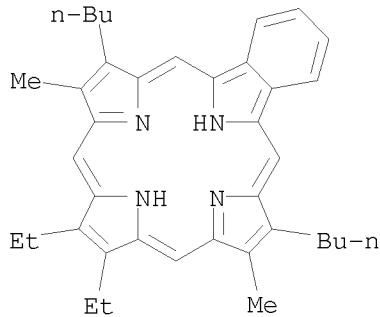
CN 30H,32H-[2,1,3]Benzothiadiazolo[4,5-b]phenanthro[9,10-1]porphine-13,25-
 diopropanoic acid, 12,26-dimethyl-, dimethyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 78 THERE ARE 78 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 55 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1998:504139 CAPLUS
 DOCUMENT NUMBER: 129:275753
 ORIGINAL REFERENCE NO.: 129:56229a, 56232a
 TITLE: A new synthesis of benzoporphyrins using 4,7-dihydro-4,7-ethano-2H-isoindole as a synthon of isoindole
 AUTHOR(S): Ito, Satoshi; Murashima, Takashi; Ono, Noboru; Uno, Hidemitsu
 CORPORATE SOURCE: Faculty of Science, Department of Chemistry, Ehime University, Matsuyama, 790-8577, Japan
 SOURCE: Chemical Communications (Cambridge) (1998), (16), 1661-1662
 CODEN: CHCOFS; ISSN: 1359-7345
 PUBLISHER: Royal Society of Chemistry
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 129:275753
 AB Heating 4,7-dihydro-4,7-ethano-2H-isoindole at 200° induces the retro-Diels-Alder reaction to give isoindole in essentially quant. yield, which can be applied to a new synthesis of tetrabenzoporphyrins and monobenzoporphyrins. Porphyrins and metalloporphyrins were prepared using 4,7-dihydro-4,7-ethano-2H-isoindole which upon heating at 200° for 10 min are converted to benzoporphyrins.
 IT 213920-98-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of benzoporphyrins by retro-Diels-Alder reaction using ethanoisoindole as synthon of isoindole)
 RN 213920-98-0 CAPLUS
 CN 23H,25H-Benzo[b]porphine, 8,19-dibutyl-13,14-diethyl-9,18-dimethyl- (9CI)

(CA INDEX NAME)



REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 56 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1998:402309 CAPLUS
 DOCUMENT NUMBER: 129:86013
 ORIGINAL REFERENCE NO.: 129:17649a,17652a
 TITLE: Use of green porphyrins for the manufacture of a medicament for the treatment of secondary cataracts
 INVENTOR(S): Meadows, Howard E.; Wenkstern, Danielle; Mallek, David R.; Bussanich, Nick; Richter, Anna M.; Levy, Julia G.; Hariton, Claude A. A.; Huber, Gustav; Rootman, Jack
 PATENT ASSIGNEE(S): Qlt Phototherapeutics, Inc., Can.; University of British Columbia; Ciba Vision Corp.
 SOURCE: PCT Int. Appl., 49 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9825610	A1	19980618	WO 1997-CA949	19971208
W: AU, CA, CN, CZ, FI, HU, IL, JP, KR, MX, NO, NZ, PL, SK, VN RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6043237	A	20000328	US 1996-762854	19961210
CA 2273010	A1	19980618	CA 1997-2273010	19971208
CA 2273010	C	20070313		
AU 9852202	A	19980703	AU 1998-52202	19971208
AU 737204	B2	20010809		
EP 948329	A1	19991013	EP 1997-946989	19971208
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
CN 1246054	A	20000301	CN 1997-180428	19971208
NZ 336196	A	20001027	NZ 1997-336196	19971208
HU 2000000576	A2	20001128	HU 2000-576	19971208
HU 2000000576	A3	20020930		
JP 2001505885	T	20010508	JP 1998-526039	19971208
ZA 9711104	A	19980710	ZA 1997-11104	19971210
NO 9902808	A	19990809	NO 1999-2808	19990609

MX 9905399	A	20000531	MX 1999-5399	19990610
KR 2000057510	A	20000915	KR 1999-705200	19990610
US 6248734	B1	20010619	US 2000-536291	20000327
PRIORITY APPLN. INFO.:			US 1996-762854	A 19961210
			WO 1997-CA949	W 19971208

OTHER SOURCE(S): MARPAT 129:86013

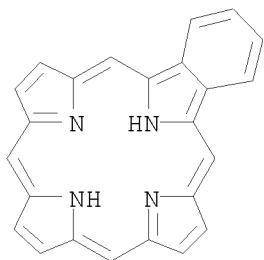
AB In photodynamic therapy to prevent secondary cataracts, green porphyrin photosensitizers are administered to the lens capsule and then irradiated to destroy remnant lens epithelial cells. An amount of green porphyrin sufficient to permit an effective amount to localize in the lens epithelial cells and sufficient time for an effective amount of said green porphyrin to localize in the lens epithelial cells are allowed before irradiating said lens epithelial cells with light absorbed by the green porphyrin at an energy level sufficient to destroy substantially all of the epithelial cells. The green porphyrins offer advantages of rapid uptake by lens epithelial cells, selectivity and effectiveness when employed in protocols directed to the destruction of remnant lens epithelial cells. Thus, human lens epithelial (HLE) cell samples were exposed to 10J/cm² red light immediately after a 10 min incubation with a benzoporphyrin derivative (BPD) (a synthetic chlorin-like porphyrin) but subsequent to removal of excess drug. As anticipated, the cell survival was greatly reduced. In in vitro studies, the sensitivity of HLE cells to BPD and light differed depending on donors and number of passages in culture.

IT 36469-17-7D, 23H,25H-Benzo[b]porphine, derivs.

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(green porphyrin photosensitizers in photodynamic therapy to prevent secondary cataracts)

RN 36469-17-7 CAPLUS

CN 23H,25H-Benzo[b]porphine (9CI) (CA INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 57 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:325324 CAPLUS

DOCUMENT NUMBER: 129:54219

ORIGINAL REFERENCE NO.: 129:11301a,11304a

TITLE: Porphyrins with Exocyclic Rings. 11. Synthesis and Characterization of Phenanthroporphyrins, a New Class of Modified Porphyrin Chromophores

AUTHOR(S): Novak, Bennett H.; Lash, Timothy D.

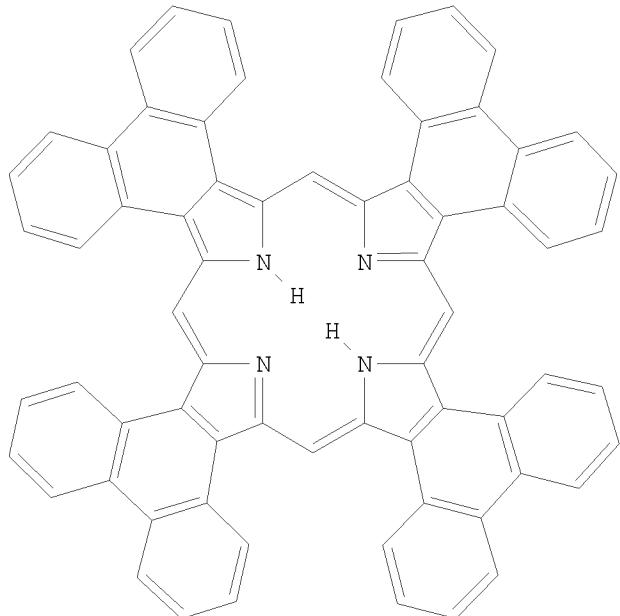
CORPORATE SOURCE: Department of Chemistry, Illinois State University, Normal, IL, 61790-4160, USA

SOURCE: Journal of Organic Chemistry (1998), 63(12), 3998-4010

CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER:
DOCUMENT TYPE:
LANGUAGE:
GI

American Chemical Society
Journal
English



I

AB To obtain insights into the factors that influence the electronic spectra of conjugated porphyrin systems, a series of porphyrins with fused phenanthrene subunits have been synthesized. 9-Nitrophenanthrene reacted with esters of isocyanoacetic acid in the presence of DBU in THF to give a series of phenanthro[9,10-c]pyrroles in good to excellent yields, and subsequent acid-catalyzed condensation with various (acetoxymethyl)pyrroles gave six examples of dipyrromethanes that incorporate a fused phenanthrene ring. Cleavage of the benzyl esters by hydrogenolysis over 10% Pd/C gave the corresponding dicarboxylic acid and this condensed with diformyldipyrromethanes under modified MacDonald "2 + 2" condensation conditions to afford the monophenanthroporphyrins. Dipyrromethanes with mixed benzyl and tert-Bu ester moieties were converted into the related formyl dipyrromethanecarboxylic acids, and subsequent head-to-tail self-condensation in the presence of p-toluenesulfonic acid yielded two examples of opp-diphenanthroporphyrins. Reaction of phenanthropyrroles with dimethoxymethane and p-toluenesulfonic acid in acetic acid afforded the sym. dipyrromethanes, and following cleavage of the ester moieties and MacDonald condensation with dialdehyde, the adj-diphenanthroporphyrin was isolated in moderate yield. Metal chelates of the mono-, opp-di-, and adj-diphenanthroporphyrin systems were also prepared, and the electronic spectra for these modified porphyrin systems and their nickel(II), copper(II), and zinc complexes were examined. Surprisingly, the UV-vis absorptions were only slightly shifted to higher wavelengths than those for octaalkylporphyrins. Reduction of Et ester with lithium aluminum hydride gave an unstable carbinol, and subsequent tetramerization in the presence of BF₃ etherate and oxidation with DDQ

afforded the tetraphenanthroporphyrin (I). The free base porphyrin was virtually insol. in organic solvents, but protonation with TFA gave a soluble dication I.2H⁺ with a strong Soret band at 482 nm and two weaker absorptions at 615 and 668 nm. The bathochromic shifts for I.2H⁺ are far more significant than those observed for the mono- and diphenanthroporphyrin structures, although again somewhat less than might have been expected for this extraordinarily high degree of ring fusion.

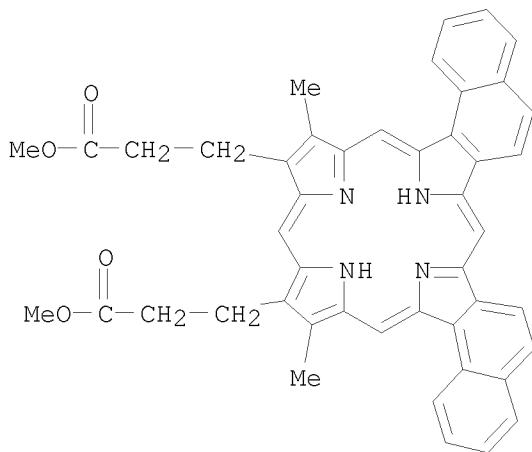
IT 159469-60-0 159469-67-7

RL: PRP (Properties)

(synthesis and characterization of phenanthroporphyrins)

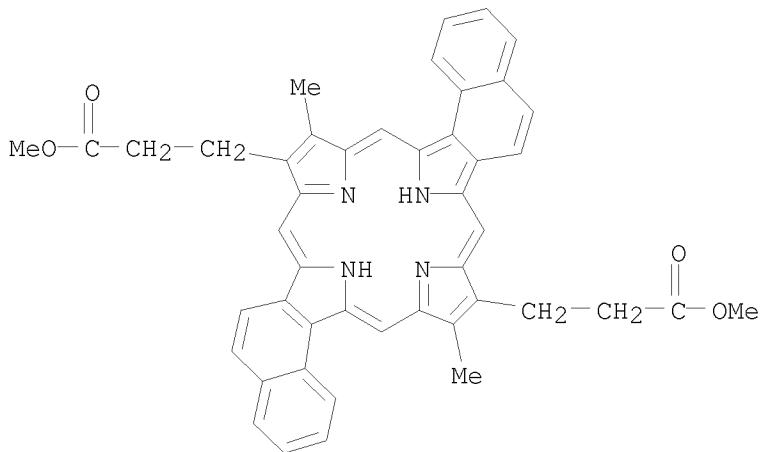
RN 159469-60-0 CAPLUS

CN 29H,31H-Dinaphtho[1,2-b:2',1'-g]porphine-20,24-dipropanoic acid,
19,25-dimethyl-, dimethyl ester (9CI) (CA INDEX NAME)



RN 159469-67-7 CAPLUS

CN 29H,31H-Dinaphtho[1,2-b:1',2'-l]porphine-10,24-dipropanoic acid,
11,25-dimethyl-, dimethyl ester (9CI) (CA INDEX NAME)

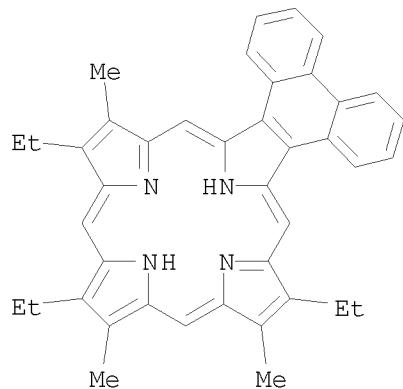


IT 165329-62-4P 165329-66-8P 208578-52-3P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis and characterization of phenanthroporphyrins)

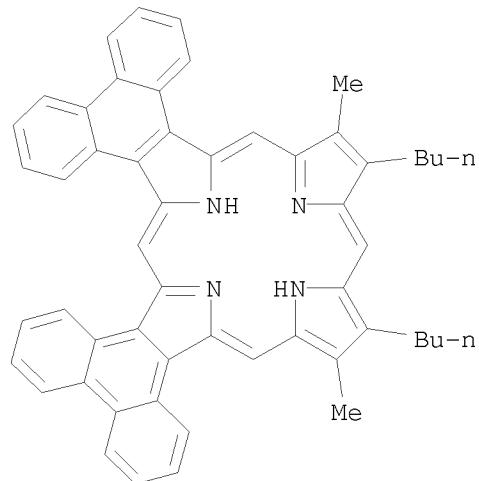
RN 165329-62-4 CAPLUS

CN 27H,29H-Phenanthro[9,10-b]porphine, 12,18,22-triethyl-13,17,23-trimethyl-
(9CI) (CA INDEX NAME)



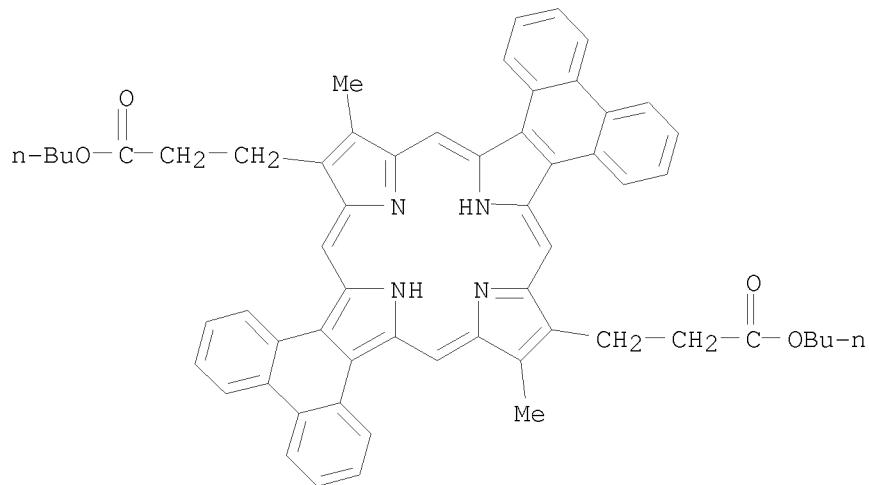
RN 165329-66-8 CAPLUS

CN 33H,35H-Diphenanthro[9,10-b:9',10'-g]porphine, 9,13-dibutyl-8,14-dimethyl-
(9CI) (CA INDEX NAME)

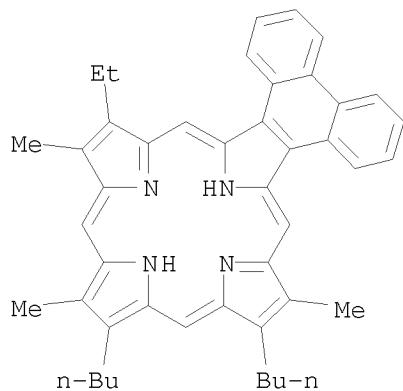


RN 208578-52-3 CAPLUS

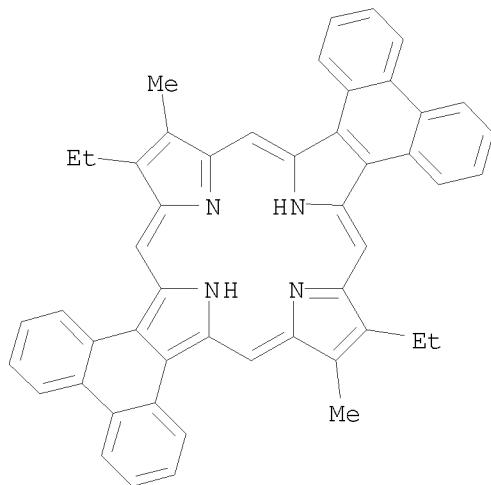
CN 33H,35H-Diphenanthro[9,10-b:9',10'-l]porphine-12,28-dipropanoic acid,
13,29-dimethyl-, dibutyl ester (9CI) (CA INDEX NAME)



IT 165329-63-5P 165329-64-6P 165329-65-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis and characterization of phenanthroporphyrins)
RN 165329-63-5 CAPLUS
CN 27H,29H-Phenanthro[9,10-b]porphine,
13,17-dibutyl-23-ethyl-12,18,22-trimethyl- (9CI) (CA INDEX NAME)

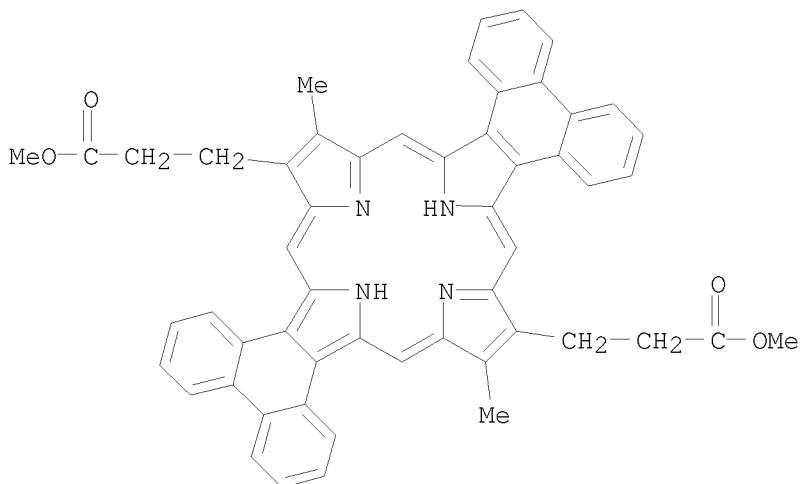


RN 165329-64-6 CAPLUS
CN 33H,35H-Diphenanthro[9,10-b:9',10'-l]porphine,
12,28-diethyl-13,29-dimethyl- (9CI) (CA INDEX NAME)



RN 165329-65-7 CAPLUS

CN 33H,35H-Diphenanthro[9,10-b:9',10'-l]porphine-12,28-dipropanoic acid,
13,29-dimethyl-, dimethyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT:

99 THERE ARE 99 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 58 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:733390 CAPLUS

DOCUMENT NUMBER: 128:42910

ORIGINAL REFERENCE NO.: 128:8255a,8258a

TITLE: Elemental sulfur-porphyrin interactions

AUTHOR(S): Rohrer, Annick; Ocampo, Ruben; Callot, Henry J.

CORPORATE SOURCE: Faculte de Chimie, URA 31 associee au CNRS, Universite Louis Pasteur, Strasbourg, 67008, Fr.

SOURCE: Bulletin de la Societe Chimique de France (1997),
134(7), 689-696

CODEN: BSCFAS; ISSN: 0037-8968

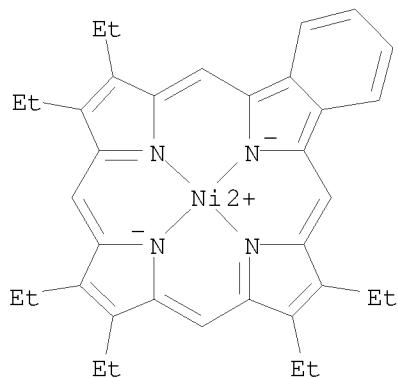
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

AB To mimic geochem. processes, several alkylporphyrins were heated in the presence of elemental S >200°. A variety of products were observed, and thiopyrano- and thienylporphyrins as well as dealkylated, homologated and dehydrogenated porphyrins were characterized.

IT 199176-05-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 199176-05-1 CAPLUS

CN Nickel, [8,9,13,14,18,19-hexaethyl-23H,25H-benzo[b]porphinato(2-) -κN23,κN24,κN25,κN26]-, (SP-4-1)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 59 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:470280 CAPLUS

DOCUMENT NUMBER: 127:149026

ORIGINAL REFERENCE NO.: 127:28789a, 28792a

TITLE: meso-Arylporphyrins as dienophiles in Diels-Alder reactions: a novel approach to the synthesis of chlorins, bacteriochlorins and naphthoporphyrins

AUTHOR(S): Tome, Augusto C.; Lacerda, Paula S. S.; Neves, Maria G. P. M. S.; Cavaleiro, Jose A. S.

CORPORATE SOURCE: Dep. Chem., Univ. Aveiro, Aveiro, 3810, Port.

SOURCE: Chemical Communications (Cambridge) (1997), (13), 1199-1200

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Meso-Arylporphyrins participate, as dienophiles, in Diels-Alder reactions with o-benzoquinodimethane to yield novel chlorins, bacteriochlorins and naphtho[2,3-b]porphyrins.

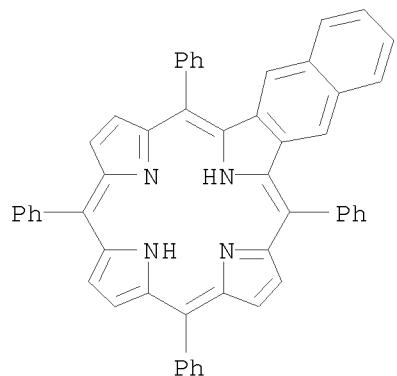
IT 193283-52-2P 193283-66-8P 193283-69-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of chlorins, bacteriochlorins and naphthoporphyrins through

Diels-Alder reactions of meso-arylporphyrins with
o-benzoquinodimethane)

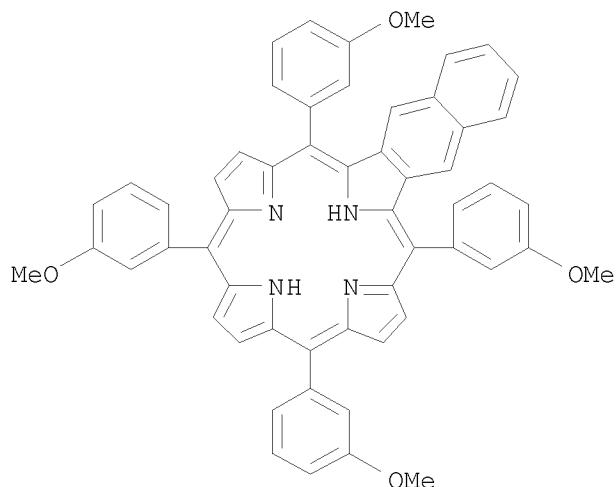
RN 193283-52-2 CAPLUS

CN 25H,27H-Naphtho[2,3-b]porphine, 7,12,17,22-tetr phenyl- (CA INDEX NAME)



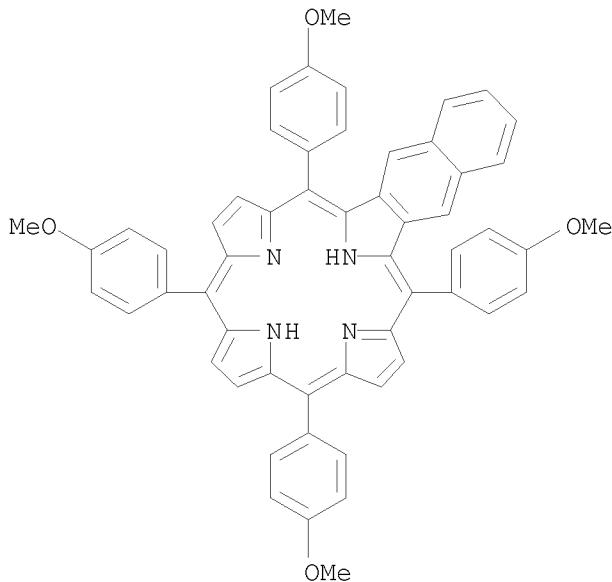
RN 193283-66-8 CAPLUS

CN 25H,27H-Naphtho[2,3-b]porphine, 7,12,17,22-tetrakis(3-methoxyphenyl)-
(9CI) (CA INDEX NAME)



RN 193283-69-1 CAPLUS

CN 25H,27H-Naphtho[2,3-b]porphine, 7,12,17,22-tetrakis(4-methoxyphenyl)-
(9CI) (CA INDEX NAME)



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 60 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:215938 CAPLUS
DOCUMENT NUMBER: 126:293213
ORIGINAL REFERENCE NO.: 126:56781a,56784a
TITLE: Synthesis of novel porphyrin chromophores from nitroarenes: further applications of the Barton-Zard pyrrole condensation
AUTHOR(S): Lash, Timothy D.; Wijesinghe, Chaminda; Osuma, Augustine T.; Patel, Jyoti R.
CORPORATE SOURCE: Dep. Chemistry, Illinois State Univ., Normal, IL, 61790-4160, USA
SOURCE: Tetrahedron Letters (1997), 38(12), 2031-2034
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 126:293213
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

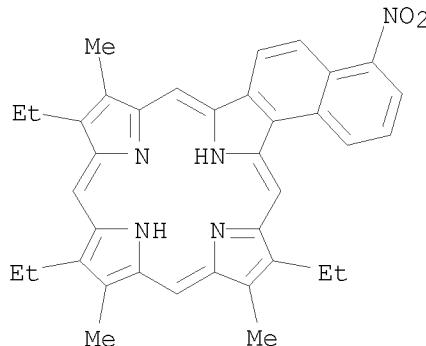
AB Porphyrins with fused nitronaphthalene I and benzothiadiazole subunits II ($R = Et, Bu$), were synthesized by the "2 + 2" and "3 + 1" methodologies; the key pyrrolic intermediates were prepared by the base catalyzed condensation of dinitronaphthalenes or 4-nitro-2,1,3-benzothiadiazole with isocyanoacetates.

IT 189124-64-9P
RL: SPN (Synthetic preparation); PREP (Preparation)

(synthesis of novel porphyrin chromophores from nitroarenes via
Barton-Zard pyrrole condensation)

RN 189124-64-9 CAPLUS

CN 25H,27H-Naphtho[1,2-b]porphine, 11,15,21-triethyl-10,16,20-trimethyl-4-nitro- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 61 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:668617 CAPLUS

DOCUMENT NUMBER: 126:47008

ORIGINAL REFERENCE NO.: 126:9265a,9268a

TITLE: Approaches to the stepwise synthesis of benzoporphyrins and phthalocyanines. Part 1. Synthesis of opp-dibenzoporphyrins (dibenzo[g,q]porphyrins)

Bonnett, Raymond; McManus, Kimberly A.

CORPORATE SOURCE: Chem. Dep., Queen Mary and Westfield College, London, E1 4NS, UK

SOURCE: Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1996), (20), 2461-2466

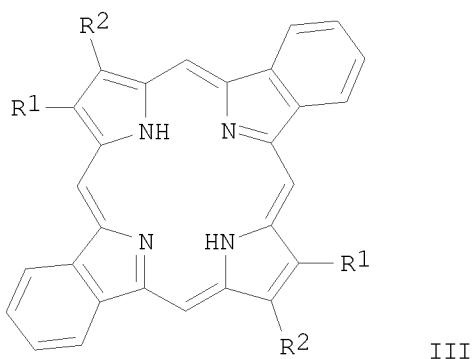
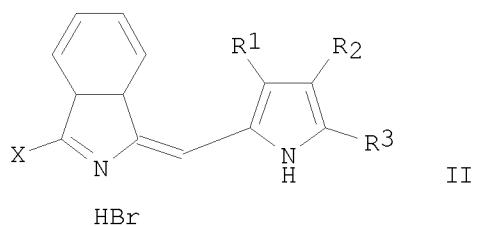
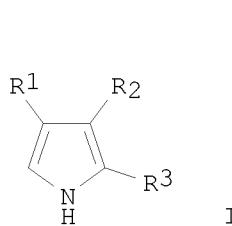
CODEN: JCPRB4; ISSN: 0300-922X

PUBLISHER: Royal Society of Chemistry

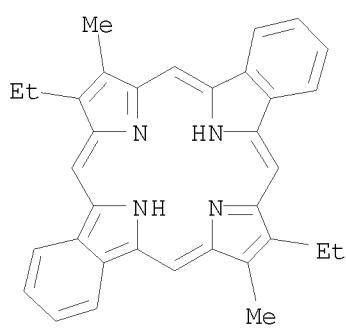
DOCUMENT TYPE: Journal

LANGUAGE: English

GI

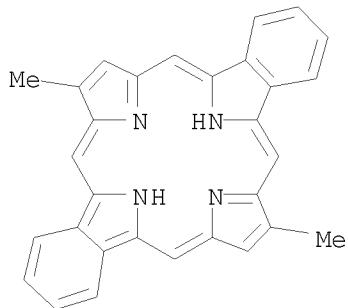


- AB A stepwise synthesis of the opp-dibenzoporphyrin (dibenzo[g,q]porphyrin) system involving isoindole precursors is described.
 3-Halogeno-1-formylisoindoles are condensed with various α -unsubstituted pyrroles I ($R_1 = Me, Et; R_2 = H, Me, Et, CO_2Et; R_3 = H, Me$) to give the corresponding benzopyrromethene hydrobromides II ($X = Cl, Br$). Thermal self-condensation of such compds. bearing an α -Me group gives the corresponding opp-dibenzoporphyrin derivs. (III) in low to modest yields depending on the β -substitution pattern of the original pyrrole component.
- IT 81976-22-9P 157869-31-3P 157869-32-4P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (synthesis of opp-dibenzoporphyrins (dibenzo[g,q]porphyrins))
- RN 81976-22-9 CAPLUS
- CN 25H,27H-Dibenzo[b,l]porphine, 8,20-diethyl-9,21-dimethyl- (9CI) (CA INDEX NAME)



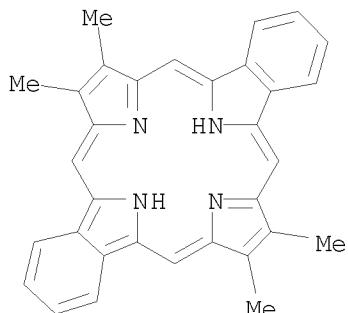
RN 157869-31-3 CAPLUS

CN 25H,27H-Dibenzo[*b,l*]porphine, 8,20-dimethyl- (9CI) (CA INDEX NAME)



RN 157869-32-4 CAPLUS

CN 25H,27H-Dibenzo[*b,l*]porphine, 8,9,20,21-tetramethyl- (9CI) (CA INDEX NAME)



L9 ANSWER 62 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:567252 CAPLUS

DOCUMENT NUMBER: 125:219600

ORIGINAL REFERENCE NO.: 125:41075a

TITLE: Green porphyrins as immunomodulators

INVENTOR(S): Chan, Anges How-Ching; Hunt, David William Carey; Levy, Julia; Obochi, Modestus Onuora Kay; Richter, Anna; Simkin, Guillermo O.

PATENT ASSIGNEE(S): Quadra Logic Technologies Inc., Can.

SOURCE: PCT Int. Appl., 32 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 5

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9622090	A1	19960725	WO 1996-CA20	19960111

W: AU, CA, CN, CZ, FI, HU, JP, KR, MX, NO, NZ, PL, SK

RW:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE			
US 5789433	A 19980804	US 1995-374158	19950117	
TW 384222	B 20000311	TW 1995-84113793	19951221	
CA 2210152	A1 19960725	CA 1996-2210152	19960111	
CA 2210152	C 20070403			
AU 9643819	A 19960807	AU 1996-43819	19960111	
AU 706796	B2 19990624			
EP 794775	A1 19970917	EP 1996-900221	19960111	
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE			
HU 9801528	A2 19981028	HU 1998-1528	19960111	
HU 9801528	A3 20000228			
CN 1198671	A 19981111	CN 1996-191441	19960111	
JP 10512268	T 19981124	JP 1996-521931	19960111	
JP 3574456	B2 20041006			
NZ 298356	A 20010427	NZ 1996-298356	19960111	
CZ 291179	B6 20030115	CZ 1997-2213	19960111	
FI 9702952	A 19970910	FI 1997-2952	19970711	
NO 9703293	A 19970916	NO 1997-3293	19970716	
PRIORITY APPLN. INFO.:		US 1995-374158	A 19950117	
		WO 1996-CA20	W 19960111	

OTHER SOURCE(S): MARPAT 125:219600

AB Green porphyrins act as antigen-specific immunomodulators in the active phase of an immune response to a particular antigen, as well as to interfere with intracellular communication. These effects occur in the absence of radiation absorbed by the green porphyrin. In example, the effect of BPD, BPD-MB or BPD-MA (benzoporphyrin derivative in monoacid or monobase form) on exptl. allergic encephalomyelitis, on delayed-type hypersensitivity, on fibrinogen binding, on skin allograft rejection, on ICAM-1 in rheumatoid arthritis, and on integrin binding was tested.

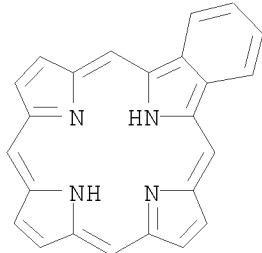
IT 36469-17-7D, 23H,25H-Benzo[b]porphine, derivs.

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(green porphyrins as immunomodulators for antigen-specific immune responses)

RN 36469-17-7 CAPLUS

CN 23H,25H-Benzo[b]porphine (9CI) (CA INDEX NAME)



L9 ANSWER 63 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:522915 CAPLUS

DOCUMENT NUMBER: 125:304707

ORIGINAL REFERENCE NO.: 125:56945a, 56948a

TITLE: High-performance liquid chromatography-mass spectrometry of porphyrins by using an atmospheric

AUTHOR(S): pressure interface
Rosell-Mele, Antoni; Carter, James F.; Maxwell, James R.
CORPORATE SOURCE: Organic Geochemistry Unit, Univ. Bristol, Bristol, BS8 1TS, UK
SOURCE: Journal of the American Society for Mass Spectrometry (1996), 7(9), 965-971
CODEN: JAMSEF; ISSN: 1044-0305
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A method was described for the high-performance liquid chromatog. (HPLC)-mass spectrometry anal. of porphyrin mixts. using an atmospheric pressure

interface, which can operate in two modes: pneumatically assisted electrospray and atmospheric pressure chemical ionization (APCI).

Optimization of

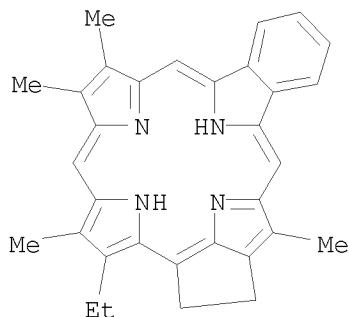
the conditions and evaluation of spectral information was carried out using direct injection of free-base and metallo porphyrin stds. The most effective results were obtained with APCI. HPLC-APCI mass spectrometry anal. of the demetalated vanadyl porphyrin fraction from Triassic Serpiano oil shale has allowed rapid characterization of the distribution; >50 significant components were present. The presence of trace amts. of high-mol.-weight (C>33) cycloalkano porphyrins indicated the occurrence of photic zone anoxia in the ancient water column. This example illustrated the potential of this approach for studies of porphyrin mixts. of environmental or biol. significance, which should be applicable to other types of metallo and free-base components that can be separated by HPLC under normal or reversed-phase conditions.

IT 100813-32-9

RL: ANT (Analyte); GOC (Geological or astronomical occurrence); ANST (Analytical study); OCCU (Occurrence)
(high-performance liquid chromatog.-chemical ionization mass spectroscopy of porphyrins in oil shale)

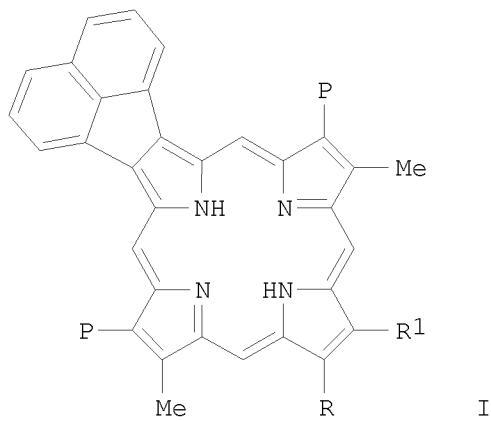
RN 100813-32-9 CAPLUS

CN 5,22:12,15-Diimino-20,18-metheno-7,10-nitrilobenzo[*o*]cyclopent[*b*]azacyclononadecine,
14-ethyl-16,17-dihydro-8,9,13,24-tetramethyl- (9CI) (CA INDEX NAME)

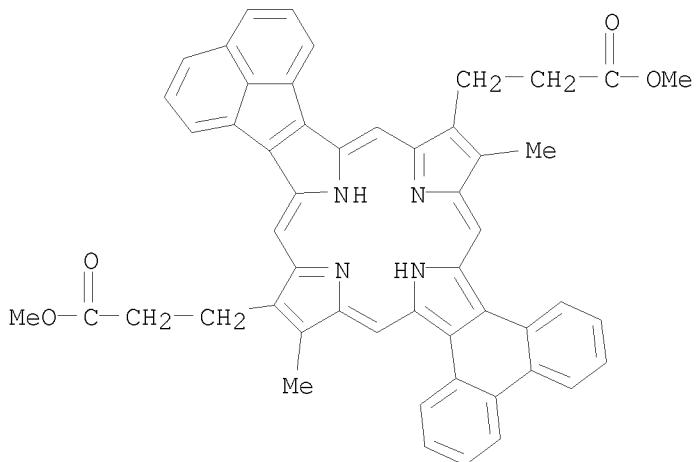


L9 ANSWER 64 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:436548 CAPLUS
DOCUMENT NUMBER: 125:167644

ORIGINAL REFERENCE NO.: 125:31409a, 31412a
TITLE: Versatile "3 + 1" syntheses of acenaphthoporphyrins, a new family of highly conjugated tetrapyrroles
AUTHOR(S): Chandrasekar, Pushpa; Lash, Timothy D.
CORPORATE SOURCE: Dep. Chem., Illinois State Univ., Normal, IL, 61790-4160, USA
SOURCE: Tetrahedron Letters (1996), 37(28), 4873-4876
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 125:167644
GI



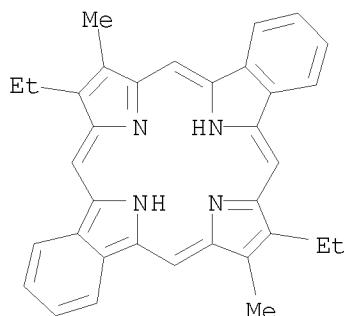
- AB Acenaphthoporphyrins I ($R = R_1 = Et$; $RR_1 = 1,8$ -naphthalenediyl, 1,1'-biphenyl-2,2'-diyl), a new group of porphyrins with strongly red shifted electronic absorption spectra, have been prepared by the acid catalyzed condensation of a pyrrole-2,5-dicarboxaldehyde with acenaphthotripyrranes; similarly, C-annelated pyrroledialdehydes afforded the related opp-diacenaphthoporphyrins and a mixed porphyrin system with fused phenanthrene and acenaphthylene rings.
- IT 180199-09-1P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (versatile syntheses and electronic absorption spectra of acenaphthoporphyrins)
- RN 180199-09-1 CAPLUS
- CN 31H,33H-Acenaphtho[1,2-b]phenanthro[9,10-1]porphine-13,26-dipropanoic acid, 12,27-dimethyl-, dimethyl ester (9CI) (CA INDEX NAME)



L9 ANSWER 65 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:418656 CAPLUS
DOCUMENT NUMBER: 125:109017
ORIGINAL REFERENCE NO.: 125:20315a,20318a
TITLE: Benzoporphyrins as photosensitizers for the photodynamic therapy of cancer
AUTHOR(S): Valles, Ma. Asuncion; Biolo, R.; Bonnett, Raymond; Canete, Magdalena; Gomez, Antonia Ma.; Jori, Giulio; Juarranz, Angeles; McManus, Kimberly A.; Okolo, Kawulia T.; et al.
CORPORATE SOURCE: Department de Quimica Organica, Universitat de Barcelona, Barcelona, 08028, Spain
SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (1996), 2625(Photochemistry: Photodynamic Therapy and Other Modalities), 11-22
CODEN: PSISDG; ISSN: 0277-786X
PUBLISHER: SPIE-The International Society for Optical Engineering
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A family of benzoporphyrins formed by differently substituted metallo tetrabenzoporphyrins and one opp-dibenzoporphyrin has been prepared. The former benzoporphyrins, and meso-tetra(m-hydroxyphenyl)chlorin (m-THPC) to act as reference, have been encapsulated into liposomes and subjected to preliminary in vitro and in vivo assays to test their efficacy as photosensitizers in the photodynamic therapy of cancer. The results of the photocytotoxicity test shows that, with the exception of the nickel complexes 5, and 7/8, the other porphyrins are photobiol. active, the Mg-tetrabenzoporphyrin 1 and the opp-dibenzoporphyrin 10 being the most active. The dark toxicity of the photoactive porphyrins is in the range described for many photosensitizers, including HPD. The in vivo assays show no toxicity in the liver for any of the compds. tested, and also that 2 is the most promising photosensitizer among them, because of an efficient localization in an exptl. mouse tumor.
IT 81976-22-9
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(benzoporphyrins as photosensitizers for photodynamic therapy of cancer with red light)

RN 81976-22-9 CAPLUS

CN 25H,27H-Dibenzo[*b,l*]porphine, 8,20-diethyl-9,21-dimethyl- (9CI) (CA INDEX NAME)

L9 ANSWER 66 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:53078 CAPLUS

DOCUMENT NUMBER: 124:116939

ORIGINAL REFERENCE NO.: 124:21781a

TITLE: Simple Methodology for Syntheses of Porphyrins Possessing Multiple Peripheral Substituents with an Element of Symmetry

AUTHOR(S): Nguyen, Liem T.; Senge, Mathias O.; Smith, Kevin M.

CORPORATE SOURCE: Department of Chemistry, University of California, Davis, CA, 95616, USA

SOURCE: Journal of Organic Chemistry (1996), 61(3), 998-1003
CODEN: JOCEAH; ISSN: 0022-3263

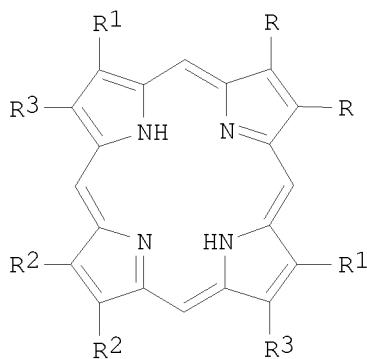
PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

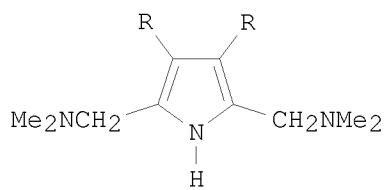
LANGUAGE: English

OTHER SOURCE(S): CASREACT 124:116939

GI



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II

AB New methodol. was developed for synthesis of regiochem. pure porphyrins I

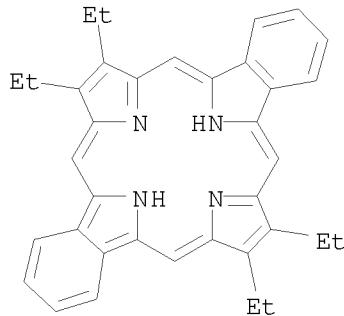
(R = R₂ = Et; R₁ = R₃ = Me) with D₂h symmetry via tetramerization reactions involving 3,4-dimethylpyrrole and II (R = Et). The corresponding opp-bis-benzoporphyrin was prepared by treatment with DDQ of I [R R = R₂ R₂ = (CH₂)₄; R₁ = R₃ = Et] from reaction of II (R = Et) and 4,5,6,7-tetrahydroisoindole. The synthetic method was further extended to allow the synthesis of more unsym. porphyrins I (R = Et; R₁ = CH₂CH₂CO₂Me; R₂ = Ph; R₃ = Me), with C₂v symmetry, by reacting a tripyrrane with II (R = Ph). The structures and substituent arrays in both type of porphyrins were confirmed by single-crystal X-ray crystallog.

IT 160389-03-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of sym. and unsym. porphyrins)

RN 160389-03-7 CAPLUS

CN 25H,27H-Dibenzo[b,l]porphine, 8,9,20,21-tetraethyl- (9CI) (CA INDEX NAME)



L9 ANSWER 67 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:14145 CAPLUS

DOCUMENT NUMBER: 124:116936

ORIGINAL REFERENCE NO.: 124:21777a,21780a

TITLE: Porphyrin synthesis by the "3 + 1" methodology: a superior approach for the preparation of porphyrins with fused 9,10-phenanthroline subunits

AUTHOR(S): Lin, Yanning; Lash, Timothy D.

CORPORATE SOURCE: Dep. Chem., Illinois State Univ., Normal, IL,
61790-4160, USA

SOURCE: Tetrahedron Letters (1995), 36(52), 9441-4

CODEN: TELEAY; ISSN: 0040-4039

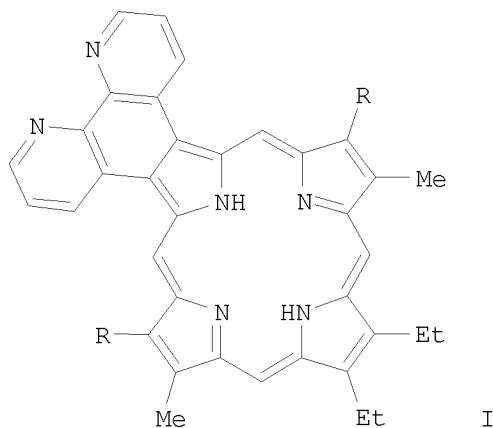
PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 124:116936

GI



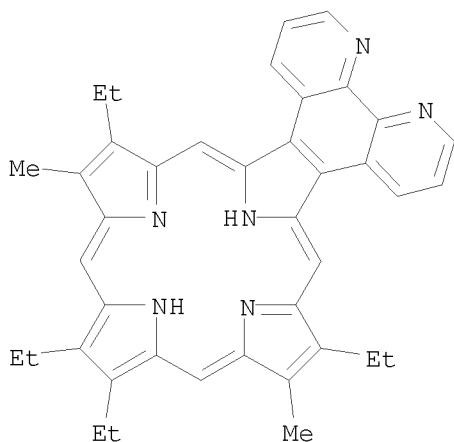
AB Porphyrins I ($R = Et, Bu$) with fused 1,10-phenanthroline subunits have been prepared in exceptionally high yields by the acid catalyzed condensation of phenanthroline substituted tripyrranes with a 2,5-pyrroledicarboxaldehyde.

IT 172806-00-7P 172806-03-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
(phenanthrolinoporphyrin synthesis via condensation of tripyrranes with pyrroledicarboxaldehyde)

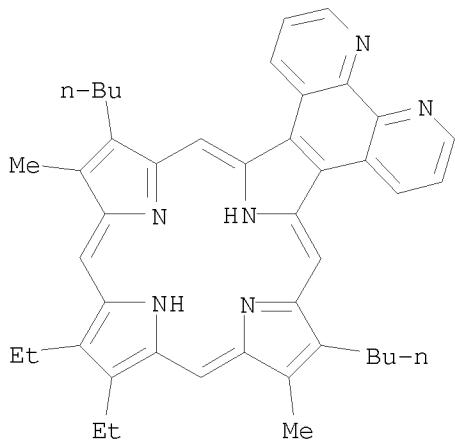
RN 172806-00-7 CAPLUS

CN 27H,29H-[1,10]Phenanthrolino[5,6-b]porphine,
12,17,18,23-tetraethyl-13,22-dimethyl- (9CI) (CA INDEX NAME)



RN 172806-03-0 CAPLUS

CN 27H,29H-[1,10]Phenanthrolino[5,6-b]porphine,
12,23-dibutyl-17,18-diethyl-13,22-dimethyl- (9CI) (CA INDEX NAME)



L9 ANSWER 68 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:874731 CAPLUS

DOCUMENT NUMBER: 123:266107

ORIGINAL REFERENCE NO.: 123:47393a, 47396a

TITLE: Pretargeting methods and compounds for pretargeted delivery of diagnostic and therapeutic agents

INVENTOR(S): Theodore, Louis J.; Meyer, Damon L.; Mallett, Robert W.; Kasina, Sudhakar; Reno, John M.; Axworthy, Donald B.; Gustavson, Linda M.

PATENT ASSIGNEE(S): Neorx Corp., USA

SOURCE: PCT Int. Appl., 250 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

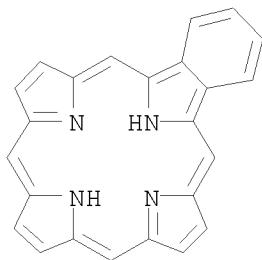
FAMILY ACC. NUM. COUNT: 14

PATENT INFORMATION:

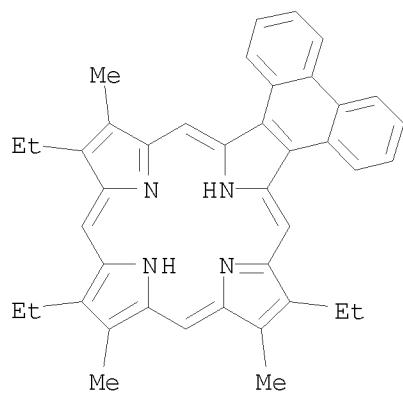
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9515979	A1	19950615	WO 1994-US14174	19941207
W: CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2178476	A1	19950615	CA 1994-2178476	19941207
EP 733066	A1	19960925	EP 1995-905334	19941207
EP 733066	B1	20031119		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 09506594	T	19970630	JP 1995-516363	19941207
EP 1346730	A1	20030924	EP 2003-8765	19941207
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
AT 254631	T	20031215	AT 1995-905334	19941207
PRIORITY APPLN. INFO.:			US 1993-163188	A 19931207
			EP 1995-905334	A3 19941207
			WO 1994-US14174	W 19941207

AB Methods, compds., compns. and kits that relate to pretargeted delivery of diagnostic and therapeutic agents are disclosed. Examples include e.g. in vivo anal. of a radiolabeled chelate-biotin conjugate administered after antibody pretargeting, clearing agent evaluation, two- and three-step

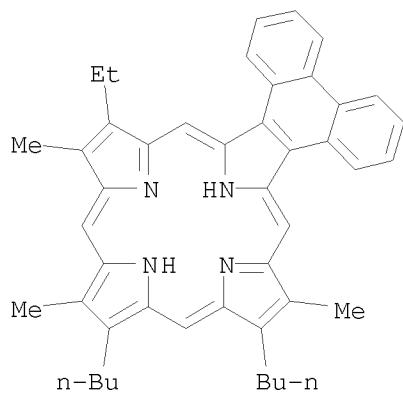
pretargeting methodol., and preparation of conjugates. The methodol. may also be used to increase photosensitizing agent localization.
IT 36469-17-7D, 23H,25H-Benzo[b]porphine, derivs., conjugates with ligand/antiligand binding pair member
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (pretargeting methods and compds. for pretargeted delivery of diagnostic and therapeutic agents, and conjugate preparation)
RN 36469-17-7 CAPLUS
CN 23H,25H-Benzo[b]porphine (9CI) (CA INDEX NAME)



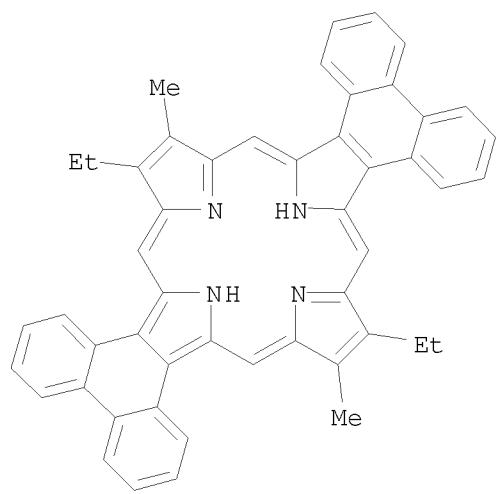
L9 ANSWER 69 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:653749 CAPLUS
DOCUMENT NUMBER: 123:83039
ORIGINAL REFERENCE NO.: 123:14857a,14860a
TITLE: New highly conjugated porphyrin chromophores:
synthesis of mono- and diphenanthroporphyrins
Lash, Timothy D.; Novak, Bennett H.
AUTHOR(S):
CORPORATE SOURCE: Dep. Chemistry, Illinois State Univ., Normal, IL,
61790-4160, USA
SOURCE: Tetrahedron Letters (1995), 36(25), 4381-84
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 123:83039
AB Porphyrins with one or two fused phenanthrene subunits have been prepared from phenanthro[9,10-c]pyrroles, which are in turn easily prepared from 9-nitrophenantrene.
IT 165329-62-4P 165329-63-5P 165329-64-6P
165329-65-7P 165329-66-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of mono- and diphenanthroporphyrins)
RN 165329-62-4 CAPLUS
CN 27H,29H-Phenanthro[9,10-b]porphine, 12,18,22-triethyl-13,17,23-trimethyl-
(9CI) (CA INDEX NAME)



RN 165329-63-5 CAPLUS
CN 27H,29H-Phenanthro[9,10-b]porphine,
13,17-dibutyl-23-ethyl-12,18,22-trimethyl- (9CI) (CA INDEX NAME)

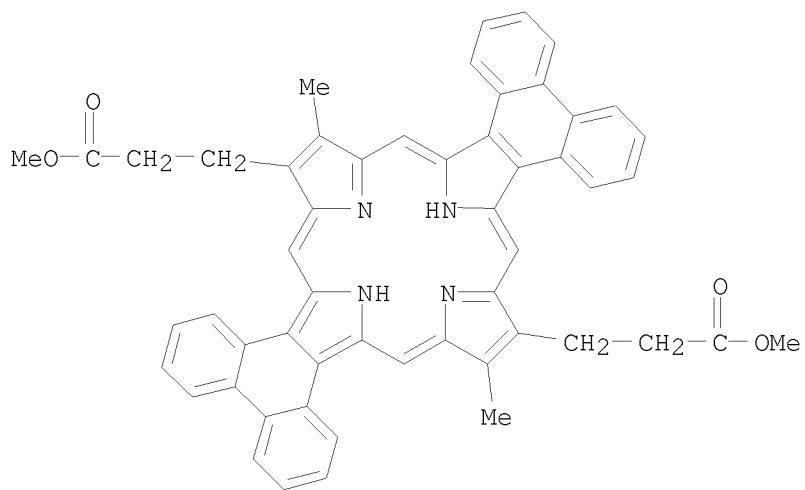


RN 165329-64-6 CAPLUS
CN 33H,35H-Diphenanthro[9,10-b:9',10'-l]porphine,
12,28-diethyl-13,29-dimethyl- (9CI) (CA INDEX NAME)



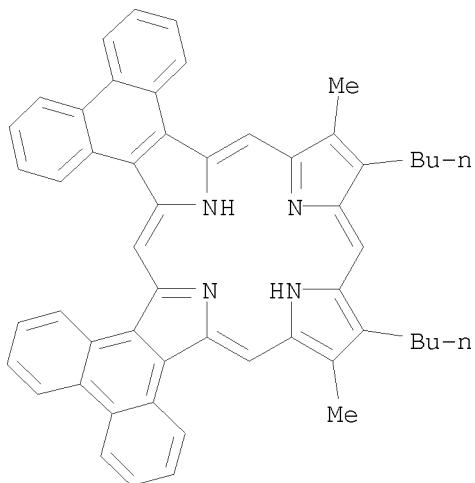
RN 165329-65-7 CAPLUS

CN 33H,35H-Diphenanthro[9,10-b:9',10'-l]porphine-12,28-dipropanoic acid,
13,29-dimethyl-, dimethyl ester (9CI) (CA INDEX NAME)



RN 165329-66-8 CAPLUS

CN 33H,35H-Diphenanthro[9,10-b:9',10'-g]porphine, 9,13-dibutyl-8,14-dimethyl-
(9CI) (CA INDEX NAME)



L9 ANSWER 70 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:323615 CAPLUS

DOCUMENT NUMBER: 122:160337

ORIGINAL REFERENCE NO.: 122:29545a, 29548a

TITLE: Porphyrins with exocyclic rings. Part 5. Synthesis of naphtho[1,2-b]porphyrin

AUTHOR(S): Lash, Timothy D.; Denny, Carl P.

CORPORATE SOURCE: Dep. Chem., Illinois State Univ., Normal, IL, 61790-4160, USA

SOURCE: Tetrahedron (1995), 51(1), 59-66
CODEN: TETRAB; ISSN: 0040-4020

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 122:160337

AB Condensation of 2-acetyl-1-tetralone with di-Et aminomalonate in refluxing acetic acid gave a dihydronaphthopyrrole in excellent yield.

Transesterification with benzyl alc. gave the corresponding benzyl ester and subsequent regioselective oxidation with lead tetraacetate afforded the acetoxyethyl derivative. This pyrrole was used in standard porphyrin chemical

to

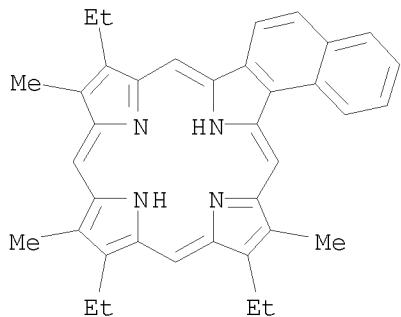
prepare 7,13,17-triethyl-8,12,18-trimethylnaphtho[1,2-b]porphyrin which exhibited an unusual electronic spectrum and this may have value in the characterization of sedimentary porphyrins.

IT 145179-53-9P

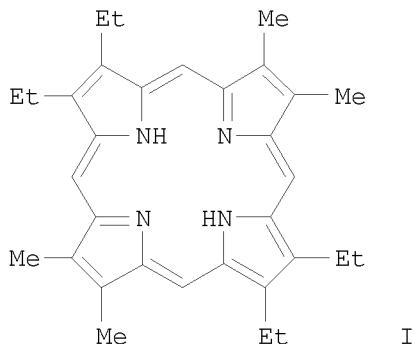
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and electronic spectrum of a naphtho[1,2-b]porphyrin)

RN 145179-53-9 CAPLUS

CN 25H,27H-Naphtho[1,2-b]porphine, 10,16,20-triethyl-11,15,21-trimethyl-
(9CI) (CA INDEX NAME)

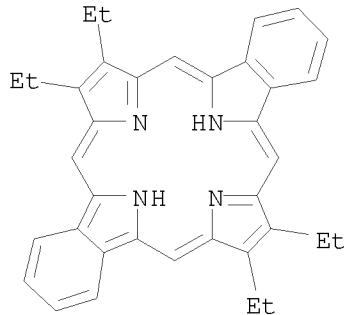


L9 ANSWER 71 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:248153 CAPLUS
DOCUMENT NUMBER: 122:80975
ORIGINAL REFERENCE NO.: 122:15383a, 15386a
TITLE: One-pot synthesis of regiochemically pure porphyrins from two different pyrroles
AUTHOR(S): Nguyen, Liem T.; Senge, Mathias O.; Smith, Kevin M.
CORPORATE SOURCE: Dep. Chem., Univ. California, Davis, CA, 95616, USA
SOURCE: Tetrahedron Letters (1994), 35(41), 7581-4
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 122:80975
GI

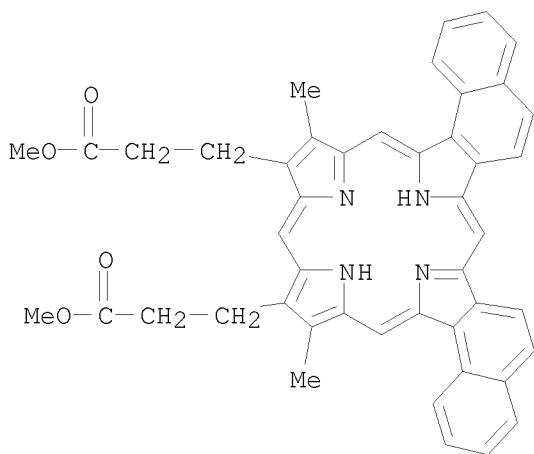


AB Treatment of 2,5-di-unsubstituted pyrroles, e.g., 3,4-diethylpyrrole, with excess of Eschenmoser's reagent (*N,N*-dimethylmethylenammonium iodide) affords 2,5-bis-(*N,N*-dimethylaminomethyl)pyrroles, e.g., 2,5-bis-(*N,N*-dimethylaminomethyl)-3,4-diethylpyrrole; reaction with a second 2,5-di-unsubstituted pyrrole, e.g., 3,4-dimethylpyrrole, gives pure porphyrin, e.g., I, with identical substituents on opposite pyrrole sub-units.
IT 160389-03-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of porphyrins with different pyrroles)

RN 160389-03-7 CAPLUS
CN 25H,27H-Dibenzo[*b,l*]porphine, 8,9,20,21-tetraethyl- (9CI) (CA INDEX NAME)

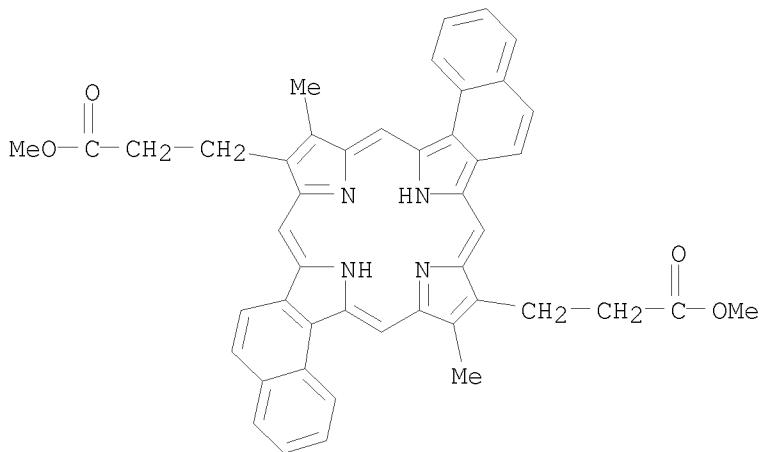


L9 ANSWER 72 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:141507 CAPLUS
DOCUMENT NUMBER: 122:9750
ORIGINAL REFERENCE NO.: 122:2169a,2172a
TITLE: Synthesis of dinaphthoporphyrins from dihydronaphtho[1,2-c]pyrroles
AUTHOR(S): Lash, Timothy D.; Roper, Tracy J.
CORPORATE SOURCE: Dep. Chem., Illinois State Univ., Normal, IL,
61790-4160, USA
SOURCE: Tetrahedron Letters (1994), 35(42), 7715-18
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Porphyrins with two fused dihydronaphtho units on the opposite or adjacent adjacent pyrrole rings have been prepared by the MacDonald condensation or by the cyclization of suitably substituted a,c-biladienes. Dehydrogenation with 2 equiv of DDQ afforded the corresponding dinaphthoporphyrins in excellent yields.
IT 159469-60-0P 159469-67-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of dinaphthoporphyrins from dihydronaphtho[1,2-c]pyrroles)
RN 159469-60-0 CAPLUS
CN 29H,31H-Dinaphtho[1,2-b:2',1'-g]porphine-20,24-dipropanoic acid,
19,25-dimethyl-, dimethyl ester (9CI) (CA INDEX NAME)



RN 159469-67-7 CAPLUS

CN 29H,31H-Dinaphtho[1,2-b:1',2'-l]porphine-10,24-dipropanoic acid,
11,25-dimethyl-, dimethyl ester (9CI) (CA INDEX NAME)



L9 ANSWER 73 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1994:605066 CAPLUS

DOCUMENT NUMBER: 121:205066

ORIGINAL REFERENCE NO.: 121:37329a, 37332a

TITLE: Opp-Dibenzoporphyrins from benzopyrromethene derivatives

AUTHOR(S): Bonnett, Raymond; McManus, Kimberly A.

CORPORATE SOURCE: Chem. Dep., Queen Mary and Westfield Coll., London, E1
4NS, UK

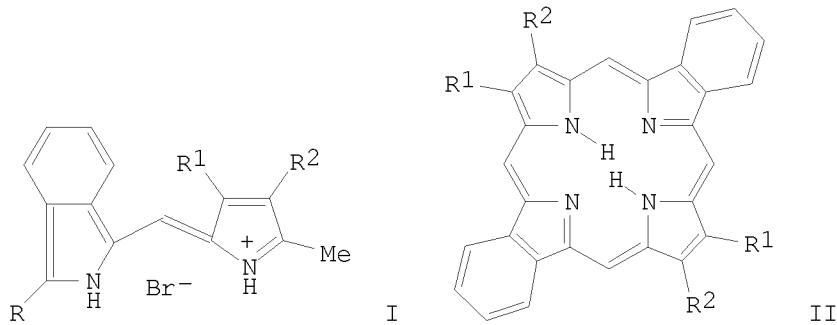
SOURCE: Journal of the Chemical Society, Chemical Communications (1994), (9), 1129-30

CODEN: JCCCAT; ISSN: 0022-4936

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



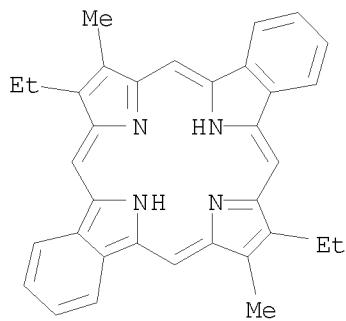
AB Condensation of 1-formyl-3-haloisoindoles with α -free pyrroles in the presence of hydrogen bromide gives the corresponding benzopyrromethene hydrobromides. Heating α -halo- α' -methylbenzopyrromethene hydrobromides I [R = Cl, R₁ = Me, R₂ = Et, H; R = Cl, R₁ = Et, R₂ = Me; R = Br, R₁ = R₂ = Me] in o-dichlorobenzene in air provides an economical synthesis of the opp-dibenzoporphyrin system II in acceptable yields.

IT 81976-22-9P 157869-31-3P 157869-32-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

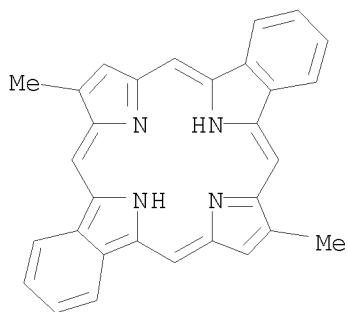
RN 81976-22-9 CAPLUS

CN 25H, 27H-Dibenzo[b,1]porphine, 8,20-diethyl-9,21-dimethyl- (9CI) (CA INDEX NAME)



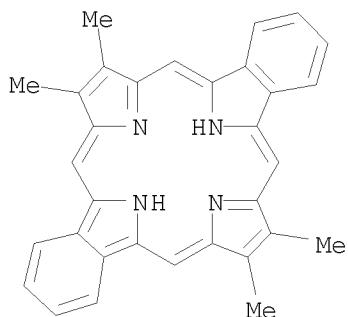
RN 157869-31-3 CAPLUS

CN 25H, 27H-Dibenzo[b,1]porphine, 8,20-dimethyl- (9CI) (CA INDEX NAME)



RN 157869-32-4 CAPLUS

CN 25H,27H-Dibenzo[b,l]porphine, 8,9,20,21-tetramethyl- (9CI) (CA INDEX NAME)



L9 ANSWER 74 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1994:453183 CAPLUS

DOCUMENT NUMBER: 121:53183

ORIGINAL REFERENCE NO.: 121:9511a,9514a

TITLE: Benzoporphyrin derivative and the photodynamic extracorporeal treatment of leukemia

AUTHOR(S): Jamieson, Catriona Helen Macleod

CORPORATE SOURCE: Univ. British Columbia, Vancouver, BC, Can.

SOURCE: (1992) 333 pp. Avail.: NLC, Order No. DANN79760
From: Diss. Abstr. Int. B 1993, 54(6), 2987

DOCUMENT TYPE: Dissertation

LANGUAGE: English

AB Unavailable

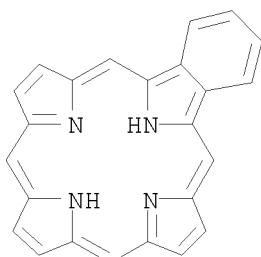
IT 36469-17-7D, 23H,25H-Benzo[b]porphine, derivative

RL: BIOL (Biological study)

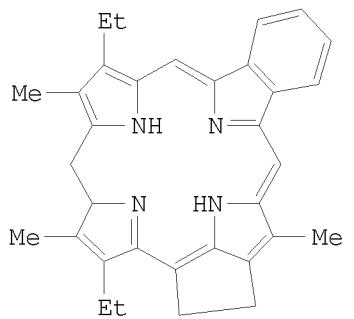
(photodynamic extracorporeal treatment of leukemia with)

RN 36469-17-7 CAPLUS

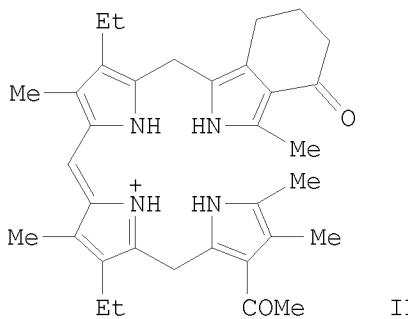
CN 23H,25H-Benzo[b]porphine (9CI) (CA INDEX NAME)



L9 ANSWER 75 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1994:323036 CAPLUS
 DOCUMENT NUMBER: 120:323036
 ORIGINAL REFERENCE NO.: 120:56821a, 56824a
 TITLE: The chemistry of pyrrolic compounds. LXIX. A synthesis of one of the naturally occurring benzoporphyrins
 Clezy, Peter S.; Leung, Christopher W. F.
 Dep. Org. Chem., Univ. New South Wales, Kensington, 2033, Australia
 SOURCE: Australian Journal of Chemistry (1993), 46(11), 1705-10
 DOCUMENT TYPE: CODEN: AJCHAS; ISSN: 0004-9425
 LANGUAGE: Journal English
 GI

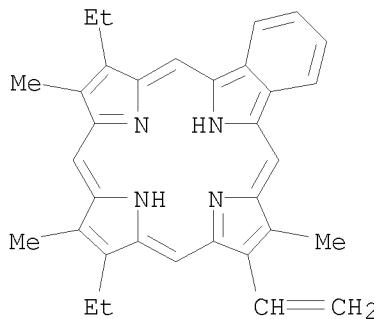


I



II

- AB The naturally occurring benzoporphyrin I has been prepared by ring synthesis utilizing an oxidative cyclization of an intermediate bilene-b II to assemble the porphyrin macrocycle.
- IT 155127-29-0
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (intermediate, synthesis of benzoporphyrin)
- RN 155127-29-0 CAPLUS
- CN 23H,25H-Benz[b]porphine, 9-ethenyl-13,19-diethyl-8,14,18-trimethyl- (9CI)
 (CA INDEX NAME)

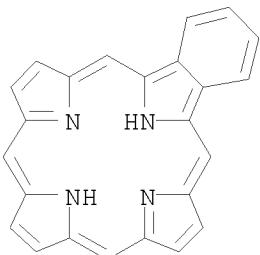


L9 ANSWER 76 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1994:293146 CAPLUS
 DOCUMENT NUMBER: 120:293146
 ORIGINAL REFERENCE NO.: 120:51526h, 51527a
 TITLE: Transcutaneous in vivo activation of photosensitive agents in blood
 INVENTOR(S): Richter, Anna M.
 PATENT ASSIGNEE(S): Quadra Logic Technologies, Inc., Can.
 SOURCE: PCT Int. Appl., 45 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9406424	A1	19940331	WO 1993-CA382	19930920
W: AT, AU, BB, BG, BR, BY, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9349405	A	19940412	AU 1993-49405	19930920
AU 681088	B2	19970821		
EP 660712	A1	19950705	EP 1993-918860	19930920
EP 660712	B1	20010530		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
HU 70966	A2	19951128	HU 1995-814	19930920
HU 220251	B	20011128		
JP 08501301	T	19960213	JP 1994-507629	19930920
JP 3598306	B2	20041208		
IL 107035	A	19981227	IL 1993-107035	19930920
NZ 255302	A	20010427	NZ 1993-255302	19930920
JP 2001316288	A	20011113	JP 2001-105544	19930920
ES 2160600	T3	20011116	ES 1993-918860	19930920
PT 660712	T	20011130	PT 1993-918860	19930920
CA 2144327	C	20020806	CA 1993-2144327	19930920
ZA 9306968	A	19940412	ZA 1993-6968	19930921
US 5484803	A	19960116	US 1995-384440	19950202
FI 9501295	A	19950517	FI 1995-1295	19950320
NO 9501066	A	19950519	NO 1995-1066	19950320

US 5736563	A	19980407	US 1995-555235	19951108
GR 3036479	T3	20011130	GR 2001-401338	20010830
PRIORITY APPLN. INFO.:			US 1992-948113	A 19920921
			JP 1994-507629	A3 19930920
			WO 1993-CA382	W 19930920
			US 1995-384440	A1 19950202

- AB A method is disclosed that destroys or impairs target cells that have selectively accumulated a photosensitizing agent. The target cells are in the bloodstream of an intact animal, which bloodstream and animal further contain nontarget cells. Radiation is applied transcutaneously to at least a portion of the intact animal at an intensity effective to impair or destroy selectivity the target cells and to leave nontarget cells relatively unimpaired. Target cells include leukemia cells, virus-containing cells, parasite-containing cells, and microorganisms (e.g. bacteria, parasites, free viruses). Results of animal studies showed that whole-body exposure to red light, following injection of BPD (benzoporphyrin derivs.), caused activation of BPD in the blood. As a result some of the BPD was photodegraded and, at the same time, a large number of BPD-preloaded tumor cells were destroyed. After treatment, neither skin photosensitivity nor change in the behavior of the animals was observed (maximum observation period was 2 wk).
- IT 36469-17-7D, 23H,25H-Benzo[b]porphine, monocarboxylated and other derivs.
- RL: BIOL (Biological study)
(transcutaneous radiation and bloodstream-contained cells with, for target cell destruction)
- RN 36469-17-7 CAPLUS
- CN 23H,25H-Benzo[b]porphine (9CI) (CA INDEX NAME)



L9 ANSWER 77 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1994:293144 CAPLUS
DOCUMENT NUMBER: 120:293144
ORIGINAL REFERENCE NO.: 120:51523a,51526a
TITLE: Method for destroying or inhibiting growth of unwanted cells or tissues using benzoporphyrin derivative photosensitizers and ionizing radiation
INVENTOR(S): Richter, Anna; Levy, Julia G.; Dolphin, David
PATENT ASSIGNEE(S): Quadra Logic Technologies, Inc., Can.
SOURCE: PCT Int. Appl., 36 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

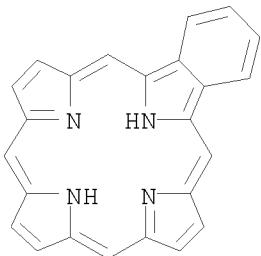
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9404147	A1	19940303	WO 1993-CA328	19930817
W: AU, CA, DK, FI, JP, KR, NO, SE RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9346954	A	19940315	AU 1993-46954	19930817
EP 654993	A1	19950531	EP 1993-917495	19930817
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 08505361	T	19960611	JP 1994-505711	19930817
CN 1099612	A	19950308	CN 1993-116757	19930903
NO 9500610	A	19950316	NO 1995-610	19950217
FI 9500730	A	19950410	FI 1995-730	19950217
US 5945439	A	19990831	US 1997-887087	19970702
PRIORITY APPLN. INFO.:			US 1992-930165	A 19920817
			WO 1993-CA328	W 19930817

OTHER SOURCE(S): MARPAT 120:293144

AB A process is disclosed for the use of a combination of ionizing radiation in conjunction with certain benzoporphyrin derivative compds. (BPD), preferably the compound benzoporphyrin derivative-monoacid ring-A (BPD-MA), to mediate the destruction of diseased or unwanted cells or tissues. Specifically, the invention is a method in which the sensitizer compds. are administered either systemically or locally to the diseased or unwanted tissue and irradiated with ionizing radiation (from e.g. 60Co or x-rays). The treatment with benzoporphyrin derivative compds. appears to sensitize the target cells or tissues in that those cells do not readily recover from irradiation exposure. Addnl., the process may be used to lower the effective amount of radiation applied to a particular tissue target. The effect of BPD-MA and radiation in tumor-bearing mice is described.

IT 36469-17-7D, 23H,25H-Benzo[b]porphine, monocarboxylated and other derivs.
 RL: BIOL (Biological study)
 (ionizing radiation and radiosensitizer of, for unwanted cell or tissue destruction)

RN 36469-17-7 CAPLUS
 CN 23H,25H-Benzo[b]porphine (9CI) (CA INDEX NAME)



L9 ANSWER 78 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1994:100742 CAPLUS
 DOCUMENT NUMBER: 120:100742
 ORIGINAL REFERENCE NO.: 120:17726h,17727a
 TITLE: The effect of differentiation of photosensitizer uptake by HL60 cells
 AUTHOR(S): Korbelik, Mladen; Krosli, Gorazd; Adomat, Hans; Skov,

Kristen A.
CORPORATE SOURCE: Cancer Imaging, BC Cancer Res. Cent., Vancouver, BC,
V5Z 1L3, Can.

SOURCE: Photochemistry and Photobiology (1993), 58(5), 670-5
CODEN: PHCBAP; ISSN: 0031-8655

DOCUMENT TYPE: Journal
LANGUAGE: English

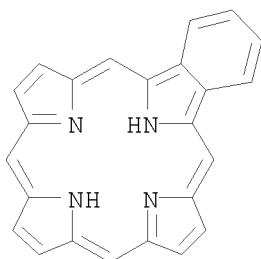
AB The capability of human promyelocytic leukemia cells HL60 to be induced to differentiate to various stages along the monocytic or myelocytic pathway was exploited for investigation of the uptake of selected photosensitizers by diverse types of cells of the same origin. The results showed that there was no substantial difference in Photofrin uptake between noninduced HL60 cells, immature monocytes, immature neutrophils and cells differentiated along the eosinophilic pathway. In contrast, HL60 cells differentiated into macrophages (HL60Φ) exhibited markedly increased Photofrin uptake, which was further enhanced by their pretreatment with bacterial lipopolysaccharide. Similar results were obtained with other photosensitizers tested: di- and tetrasulfonated aluminum phthalocyanines (AlPcS2 and AlPcS4), tetrasulfonated zinc phthalocyanine (ZnPcS4), tetraphenylporphine tetrasulfonate (TPPS4) and benzoporphyrin derivative monoacid (BPD). Despite marked differences in the state of self-aggregation and other chemical properties of these compds., the degree of their preferential uptake by HL60Φ cells showed very little variation. In a typical experiment, the uptake of these photosensitizers by HL60Φ cells was 4-5-fold higher than the uptake by noninduced HL60 cells. In addition to the fluorometric assay employed in most of the expts., the cellular concentration of AlPcS was determined by measurement of elementary aluminum using atomic absorption spectroscopy.

IT 36469-17-7D, 23H,25H-Benzo[b]porphine, derivs.

RL: BIOL (Biological study)
(uptake of, by human promyelocytic leukemia cells, differentiation effect on)

RN 36469-17-7 CAPLUS

CN 23H,25H-Benzo[b]porphine (9CI) (CA INDEX NAME)



L9 ANSWER 79 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1993:182184 CAPLUS

DOCUMENT NUMBER: 118:182184

ORIGINAL REFERENCE NO.: 118:30980h,30981a

TITLE: Benzopyrazinoporphyrazine derivatives with near-infrared absorption

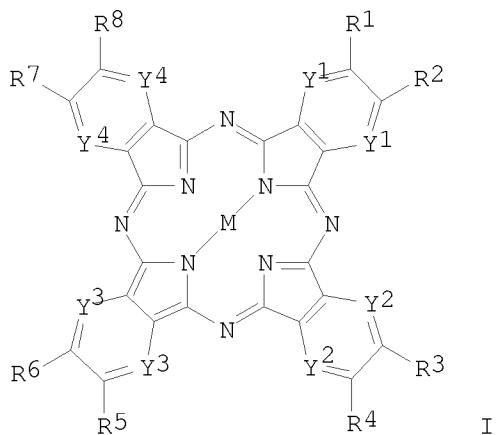
INVENTOR(S): Tokita, Sumio

PATENT ASSIGNEE(S): Nippon Soda Co., Ltd., Japan

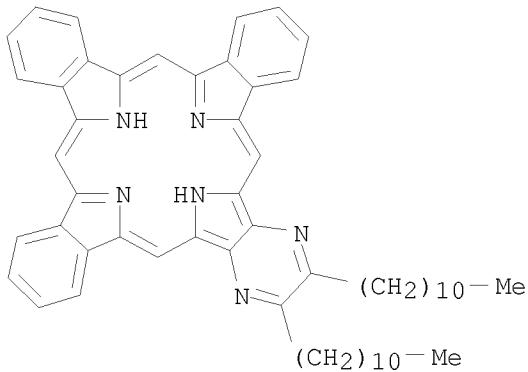
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04283581	A	19921008	JP 1991-72063	19910313
PRIORITY APPLN. INFO.:			JP 1991-72063	19910313
OTHER SOURCE(S): GI	MARPAT	118:182184		



- AB The title derivs. I [R1-8 = X1[(CH₂)_mX₂]_nR₉; X₁ = CH₂, O, S, NR₁₀; X₂ = O, S, NR₁₁; R₉₋₁₁ = (un)substituted alkyl, aryl, or alkenyl; Y₁₋₄ = N, CH; not all of Y₁₋₄ are the same; M = 2H, metal, metal oxide, metal hydroxide, acyl metal, metal alkoxide, metal siloxide, metal halide; m,n = 0-3] are claimed. I, with high near-IR absorption and organic solvent solubility, are useful for optical recording media, electrophotog. photoreceptors, redox catalysts, flavor preservatives, etc.
- IT 146628-43-5P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of, near-IR-absorbing)
- RN 146628-43-5 CAPLUS
- CN 29H,31H-Tribenzo[b,g,l]pyrazino[2,3-q]porphine, 2,3-diundecyl- (9CI) (CA INDEX NAME)



L9 ANSWER 80 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1993:127825 CAPLUS

DOCUMENT NUMBER: 118:127825

ORIGINAL REFERENCE NO.: 118:22091a, 22094a

TITLE: Geochemical origins of sedimentary benzoporphyrins and tetrahydrobenzoporphyrins

AUTHOR(S): Lash, Timothy D.

CORPORATE SOURCE: Dep. Chem., Illinois State Univ., Normal, IL,
61761-6901, USA

SOURCE: Energy & Fuels (1993), 7(2), 166-71
CODEN: ENFUEM; ISSN: 0887-0624

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Complex mixts. of metalloporphyrins are associated with organic-rich sediments. Although some of these petroporphyrins were correlated with known biol. pigments, the origins of certain structures are obscure. Benzoporphyrins and tetrahydrobenzoporphyrins, 2 minor families of geol. tetrapterroles, were isolated from numerous oil shales and petroleums but the origins of these mol. fossils are poorly understood. A number of possible pathways for the geochem. formation of benzo- and tetrahydrobenzoporphyrins are discussed. The data presently available favors a Diels-Alder cycloaddn. mechanism between putative divinylchlorophyll and quinone precursors for the formation of these compds. As an aid to these studies, total syntheses of benzo- and naphthoporphyrins were been carried out and the spectroscopic properties of these extended chromophores are discussed. Further studies are proposed to help distinguish between the various possible pathways for the geochem. genesis of tetrahydrobenzo- and benzoporphyrins.

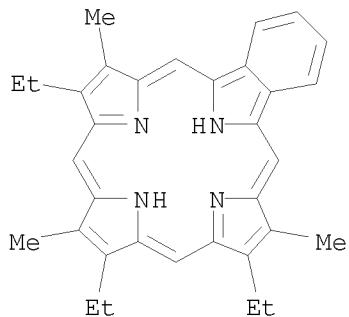
IT 145179-52-8P 145179-53-9P

RL: PREP (Preparation)

(preparation of, geochem. origins of sedimentary benzoporphyrins and tetrahydrobenzoporphyrins in relation to)

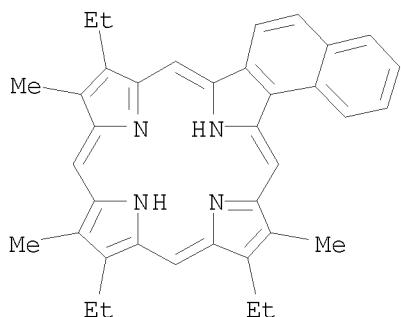
RN 145179-52-8 CAPLUS

CN 23H,25H-Benz[b]porphine, 9,13,18-triethyl-8,14,19-trimethyl- (9CI) (CA INDEX NAME)



RN 145179-53-9 CAPLUS

CN 25H,27H-Naphtho[1,2-b]porphine, 10,16,20-triethyl-11,15,21-trimethyl- (9CI) (CA INDEX NAME)



L9 ANSWER 81 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1992:633672 CAPLUS

DOCUMENT NUMBER: 117:233672

ORIGINAL REFERENCE NO.: 117:40399a, 40402a

TITLE: Regioselective and stereoselective Diels-Alder reactions of unsymmetrical 1,2-disubstituted vinyl sulfones with monovinylporphyrin

AUTHOR(S): Yon-Hin, Paul; Wijesekera, Tilak P.; Dolphin, David
CORPORATE SOURCE: Dep. Chem., Univ. British Columbia, Vancouver, BC, V6T 1Y6, Can.

SOURCE: New Journal of Chemistry (1992), 16(5), 537-9

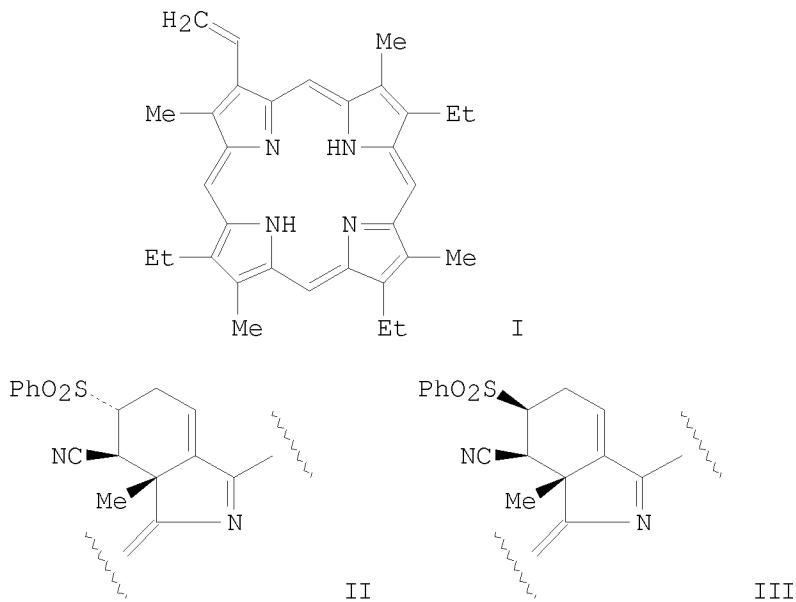
CODEN: NJCHE5; ISSN: 1144-0546

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 117:233672

GI

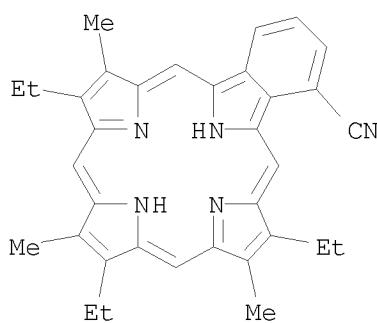


AB A study of the Diels-Alder reactions of several 1,2-disubstituted vinyl sulfones with a β -methyl- β' -monovinylporphyrin (I) shows that the cycloaddns. are highly regioselective and that stereochem. control can be manipulated by replacing a carboxyl ester group by a cyano group or by changing of the dienophile. Thus, reacting I with (E)- and (Z)-PhSO₂CH:CHCN gave adducts II and III, resp.

IT 144460-87-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

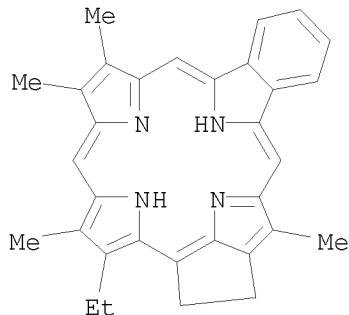
RN 144460-87-7 CAPLUS

CN 23H,25H-Benzo[b]porphine-1-carbonitrile,
9,14,19-triethyl-8,13,18-trimethyl- (9CI) (CA INDEX NAME)



L9 ANSWER 82 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1992:238486 CAPLUS
DOCUMENT NUMBER: 116:238486
ORIGINAL REFERENCE NO.: 116:40381a, 40384a

TITLE: Biological markers in Chinese ancient sediments. 1.
Geoporphyrins
AUTHOR(S): Peng, Pingan; Eglinton, G.; Fu, Jiamo; Sheng, Guoying
CORPORATE SOURCE: Sch. Chem., Univ. Bristol, Bristol, BS8 1TS, UK
SOURCE: Energy & Fuels (1992), 6(2), 215-25
CODEN: ENFUEM; ISSN: 0887-0624
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Eleven Chinese ancient sediments (9 Paleocene and 2 Permian) from freshwater lacustrine, hypersaline lacustrine, coal swamp, and marine deposits (4, 4, 2, and 1 samples, resp.) were examined for content and distribution of geoporphyrins and compared with those of 3 reference samples [e.g., Gilsonite bitumen (saline lacustrine), Serpiano oil shale (marine anoxic), and Boscan oil (marine anoxic)]. The geoporphyrins were isolated as sep. Ni and vanadyl fractions. Demetallation afforded free geoporphyrins which were examined by HPLC (normal phase with silica); the HPLC traces could be grouped into 4 different paleoenvironmental types. Assignments of .apprx.15 major porphyrins could be made by coinjection of porphyrin stds. isolated from the reference samples. Conversion of free base porphyrins to their bis(tert-butyldimethyl)silyl derivs., followed by gas chromatog.-mass spectroscopy (GC-MS) and computerized data processing, provided the distributions of 38 compds., which were also assigned by coinjection of stds. These 38 compds. (in 8 series) account for 49-85% of total porphyrins (mostly >70%). A series of 4 unidentified geoporphyrins is dominant in samples from hypersaline lacustrine paleoenvironments. These compds. coelute with 131-Me cycloalkylporphyrins on normal-phase HPLC but are clearly separable on GC-MS.
IT 100813-32-9
RL: OCCU (Occurrence)
(biomarker, in ancient geol. sediments, of China)
RN 100813-32-9 CAPLUS
CN 5,22:12,15-Diimino-20,18-metheno-7,10-nitrilobenzo[ο]cyclopent[b]azacyclononadecine,
14-ethyl-16,17-dihydro-8,9,13,24-tetramethyl- (9CI) (CA INDEX NAME)



L9 ANSWER 83 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1992:190223 CAPLUS
DOCUMENT NUMBER: 116:190223
ORIGINAL REFERENCE NO.: 116:32119a,32122a
TITLE: Photosensitizing potency of structural analogs of benzoporphyrin derivative (BPD) in a mouse tumor model
AUTHOR(S): Richter, A. M.; Waterfield, E.; Jain, A. K.; Allison,

CORPORATE SOURCE: B.; Sternberg, E. D.; Dolphin, D.; Levy, J. G.
Dep. Microbiol., Univ. British Columbia, Vancouver,
BC, V6T 1W5, Can.

SOURCE: British Journal of Cancer (1991), 63(1), 87-93
CODEN: BJCAAI; ISSN: 0007-0920

DOCUMENT TYPE: Journal
LANGUAGE: English

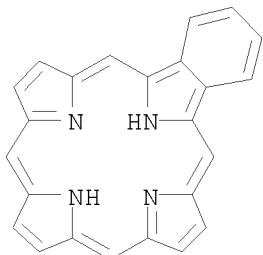
AB The in vivo characteristics of four analogs of benzoporphyrin derivative (BPD) were investigated. Biodistribution data obtained in DBA/2J mice with BPD-MA (monoacid ring A analog) which had been tritiated or internally labeled with 14C showed that both labeled materials acted in an essentially identical manner during the period of study. Biodistribution and clearance studies showed that relative distribution in a variety of mouse tissues was similar for all BPD analogs. M 1 tumor cells (rhabdomyosarcoma in DBA/2J mice) taken from tumors excised from animals treated 3 h earlier with BPD, and tested in vitro for photosensitivity provided evidence that significant levels of photosensitizer detected in tumor was both active and associated with tumor cells. The monoacid forms of BPD were found to be much more photodynamically active in this test were the diacid analogs. The ability of the analogs to ablate tumors in mice by photodynamic therapy was also tested. Again, BPD-MA and BPD-MB proved to be measurably better than the diacid analogs. These findings are discussed in reference to structural and phys. differences between the analogs.

IT 36469-17-7D, 23H,25H-Benzo[b]porphine, derivs.

RL: BIOL (Biological study)
(36469177)

RN 36469-17-7 CAPLUS

CN 23H,25H-Benzo[b]porphine (9CI) (CA INDEX NAME)



L9 ANSWER 84 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1991:549231 CAPLUS

DOCUMENT NUMBER: 115:149231

ORIGINAL REFERENCE NO.: 115:25321a,25324a

TITLE: Tabulation of exact masses and comparison of isotope patterns expected for geoporphyrin molecular ions in electron ionization mass spectra

AUTHOR(S): Van Berkel, Gary J.; Castro, Aidalu Joubert; Filby, Royston H.

CORPORATE SOURCE: Anal. Chem. Div., Oak Ridge Natl. Lab., Oak Ridge, TN, 37831-6365, USA

SOURCE: Applied Geochemistry (1991), 6(1), 105-17
CODEN: APPGEY; ISSN: 0883-2927

DOCUMENT TYPE: Journal
LANGUAGE: English

AB Exact masses (± 0.0001 u) were tabulated (Cmin-C50) for free-base, Mn, Fe, Ni, Cu, Zn, vanadyl (VO), and Ga complexes of the major geoporphyrin skeletal types and several com. available porphyrin complexes. The data in these tables are intended as a resource to aid in geoporphyrin identification (i.e. determination of carbon number, skeletal type and metal chelated) by low-resolution electron ionization-mass spectrometry (EI-MS) and by high-resolution EI-MS in cases where exact mass determination is performed.

A

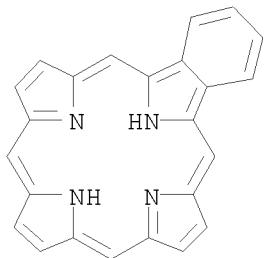
comparison was made of the isotope patterns calculated for the mol. ions of the various porphyrin skeletal types as free-base species and as the 7 metal complexes mentioned above. The isotope pattern of a metalloporphyrin mol. ion is a useful aid in identifying the metal complexed. Correction of mol. ion abundances (i.e. porphyrin abundances) for overlap of mol. ion isotope peaks and for overlap of fragment ion peaks with mol. ion peaks, both of which can occur when analyzing complex geoporphyrin mixts., is discussed.

IT 36469-17-7D, 23H,25H-Benzo[b]porphine, alkyl derivs.
99625-79-3D, alkyl derivs. 128920-36-5D, alkyl derivs.
135539-74-1D, alkyl derivs. 135539-75-2D, alkyl derivs.
135539-76-3D, alkyl derivs. 135539-77-4D, alkyl derivs.
135539-78-5D, alkyl derivs. 135539-79-6D, alkyl derivs.
135539-80-9D, alkyl derivs. 135539-81-0D, alkyl derivs.
135539-82-1D, alkyl derivs. 135539-83-2D, alkyl derivs.
135539-84-3D, alkyl derivs. 135539-85-4D, alkyl derivs.
135539-86-5D, alkyl derivs.

RL: ANT (Analyte); ANST (Analytical study)
(identification of, by mass spectroscopy, exact mass calcns. for)

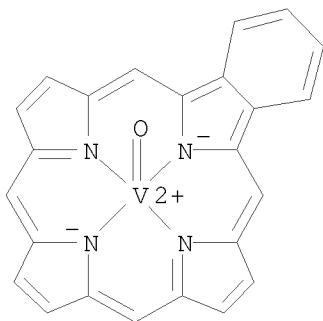
RN 36469-17-7 CAPLUS

CN 23H,25H-Benzo[b]porphine (9CI) (CA INDEX NAME)



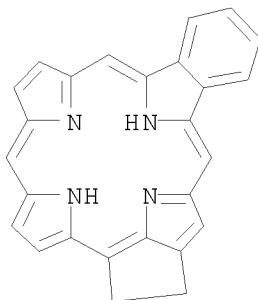
RN 99625-79-3 CAPLUS

CN Vanadium, [23H,25H-benzo[b]porphinato(2-) -N23,N24,N25,N26]oxo-, (SP-5-12)-
(9CI) (CA INDEX NAME)



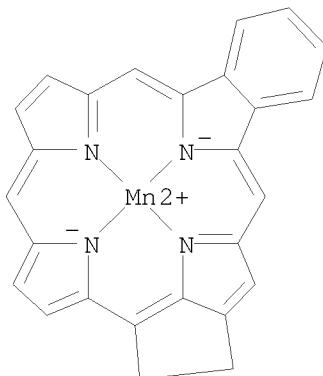
RN 128920-36-5 CAPLUS

CN 5,22:12,15-Diimino-20,18-metheno-7,10-nitrilobenzo[ο]cyclopent[b]azacyclononadecine, 16,17-dihydro- (9CI) (CA INDEX NAME)



RN 135539-74-1 CAPLUS

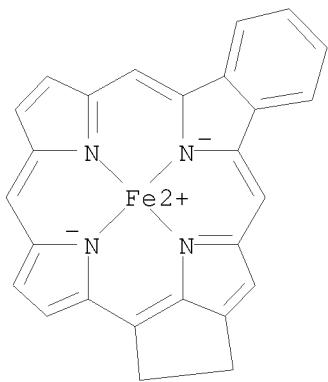
CN Manganese, [16,17-dihydro-5,22:12,15-diimino-20,18-metheno-7,10-nitrilobenzo[ο]cyclopent[b]azacyclononadecinato(2-) -N19,N23,N25,N26]-, (SP-4-2)- (9CI) (CA INDEX NAME)



RN 135539-75-2 CAPLUS

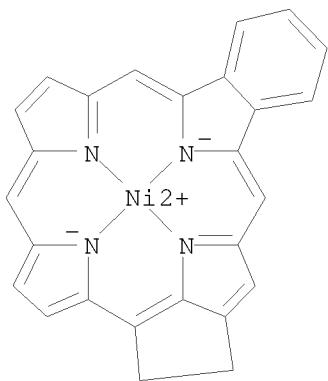
CN Iron, [16,17-dihydro-5,22:12,15-diimino-20,18-metheno-7,10-nitrilobenzo[ο]cyclopent[b]azacyclononadecinato(2-) -N19,N23,N25,N26]-,

(SP-4-2)- (9CI) (CA INDEX NAME)



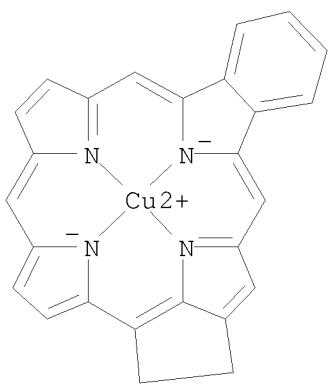
RN 135539-76-3 CAPLUS

CN Nickel, [16,17-dihydro-5,22:12,15-diimino-20,18-metheno-7,10-nitrilobenzo[ο]cyclopent[b]azacyclononadecinato(2-)N19,N23,N25,N26]-,
(SP-4-2)- (9CI) (CA INDEX NAME)



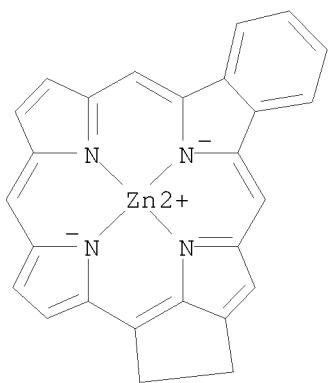
RN 135539-77-4 CAPLUS

CN Copper, [16,17-dihydro-5,22:12,15-diimino-20,18-metheno-7,10-nitrilobenzo[ο]cyclopent[b]azacyclononadecinato(2-)N19,N23,N25,N26]-,
(SP-4-2)- (9CI) (CA INDEX NAME)



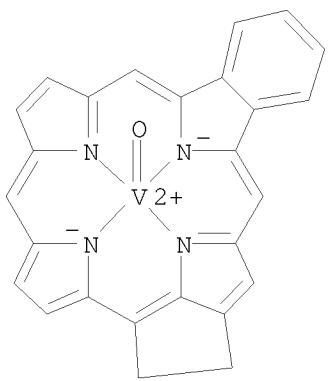
RN 135539-78-5 CAPLUS

CN Zinc, [16,17-dihydro-5,22:12,15-diimino-20,18-metheno-7,10-nitrilobenzo[ο]cyclopent[b]azacyclononadecinato(2-)N19,N23,N25,N26]-, (SP-4-2)- (9CI) (CA INDEX NAME)

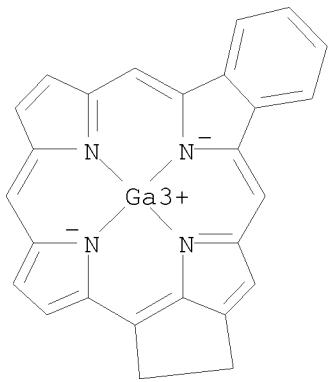


RN 135539-79-6 CAPLUS

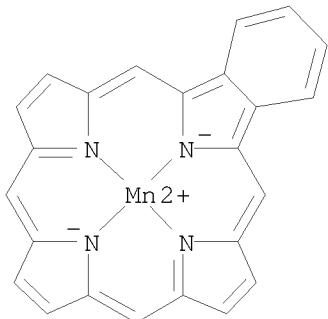
CN Vanadium, [16,17-dihydro-5,22:12,15-diimino-20,18-metheno-7,10-nitrilobenzo[ο]cyclopent[b]azacyclononadecinato(2-)N19,N23,N25,N26]oxo-, (SP-5-13)- (9CI) (CA INDEX NAME)



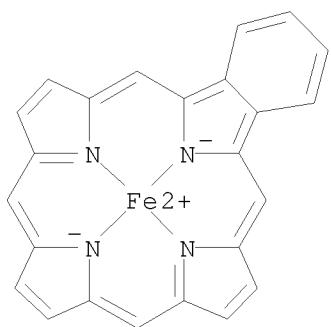
RN 135539-80-9 CAPLUS
CN Gallium(1+), [16,17-dihydro-5,22:12,15-diimino-20,18-metheno-7,10-nitrilobenzo[ο]cyclopent[b]azacyclononadecinato(2-)N19,N23,N25,N26]-, (SP-4-2)- (9CI) (CA INDEX NAME)



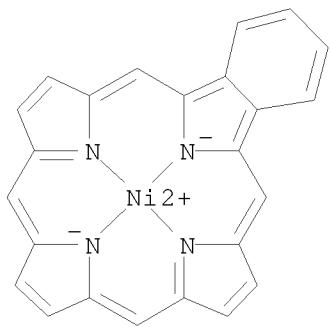
RN 135539-81-0 CAPLUS
CN Manganese, [23H,25H-benzo[b]porphinato(2-)N23,N24,N25,N26]-, (SP-4-1)- (9CI) (CA INDEX NAME)



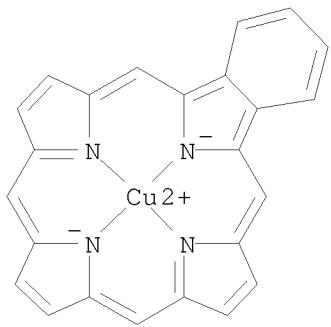
RN 135539-82-1 CAPLUS
CN Iron, [23H,25H-benzo[b]porphinato(2-)N23,N24,N25,N26]- (9CI) (CA INDEX NAME)



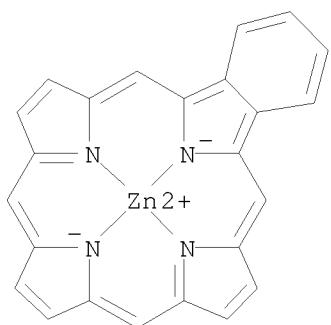
RN 135539-83-2 CAPLUS
CN Nickel, [23H,25H-benzo[b]porphinato(2-) -N23,N24,N25,N26]-, (SP-4-1)- (9CI)
(CA INDEX NAME)



RN 135539-84-3 CAPLUS
CN Copper, [23H,25H-benzo[b]porphinato(2-) -N23,N24,N25,N26]-, (SP-4-1)- (9CI)
(CA INDEX NAME)

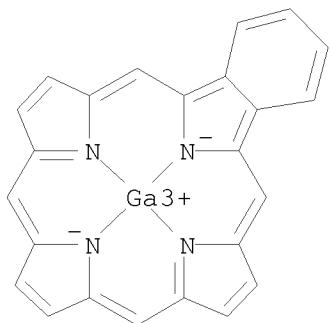


RN 135539-85-4 CAPLUS
CN Zinc, [23H,25H-benzo[b]porphinato(2-) -N23,N24,N25,N26]-, (SP-4-1)- (9CI)
(CA INDEX NAME)



RN 135539-86-5 CAPLUS

CN Gallium(1+), [23H,25H-benzo[b]porphinato(2-) -N23,N24,N25,N26]-, (SP-4-1)-
(9CI) (CA INDEX NAME)



L9 ANSWER 85 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1991:471237 CAPLUS

DOCUMENT NUMBER: 115:71237

ORIGINAL REFERENCE NO.: 115:12303a,12306a

TITLE: Total synthesis of chlorophyll c fossils and related
petroporphyrins

AUTHOR(S): Bauder, Claude; Ocampo, Ruben; Callot, Henry J.

CORPORATE SOURCE: Inst. Chim., Univ. Louis Pasteur, Strasbourg, 67000,
Fr.

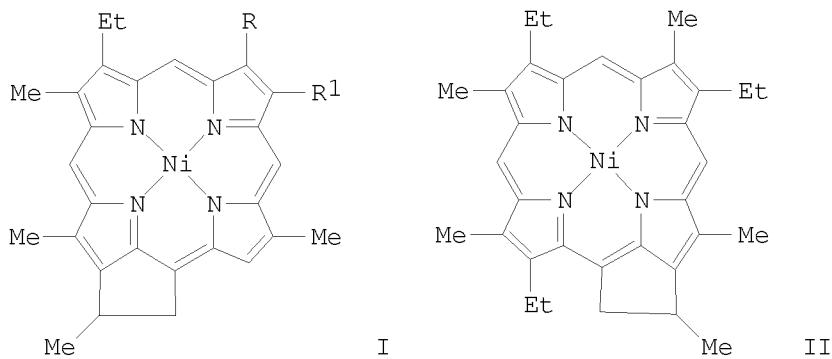
SOURCE: Tetrahedron Letters (1991), 32(22), 2537-40

CODEN: TELEAY; ISSN: 0040-4039

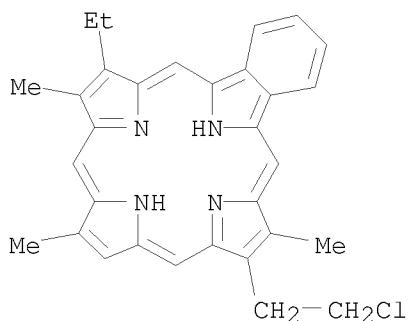
DOCUMENT TYPE: Journal

LANGUAGE: English

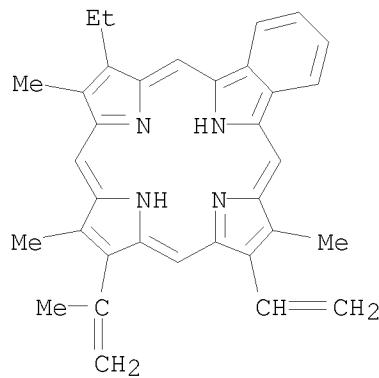
GI



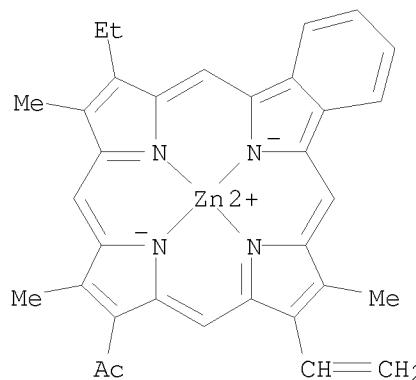
AB Petroporphyrins I [R = Me, R₁ = Et; RR₁ = (CH₂)₄] and II, related to chlorophyll c were prepared via cyclization of an isopropenyl group.
 IT 135241-24-6
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (complexation and acetylation of)
 RN 135241-24-6 CAPLUS
 CN 23H,25H-Benzo[b]porphine, 18-(2-chloroethyl)-8-ethyl-9,13,19-trimethyl-
 (9CI) (CA INDEX NAME)



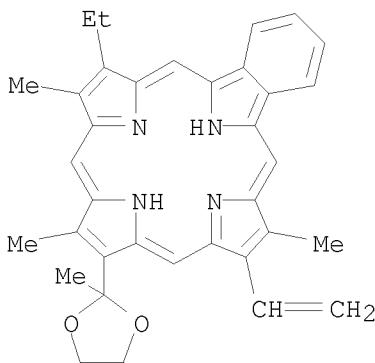
IT 135241-30-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and cyclization of)
 RN 135241-30-4 CAPLUS
 CN 23H,25H-Benzo[b]porphine, 9-ethenyl-19-ethyl-8,14,18-trimethyl-13-(1-
 methylethenyl)- (9CI) (CA INDEX NAME)



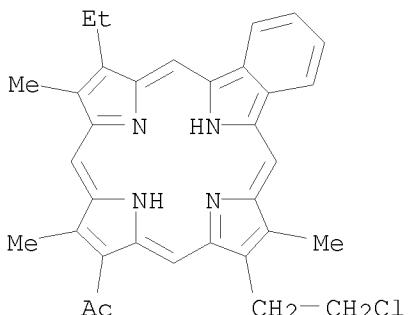
IT 135162-66-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and methylenation of)
RN 135162-66-2 CAPLUS
CN Zinc, [1-(9-ethenyl-19-ethyl-8,14,18-trimethyl-23H,25H-benzo[b]porphin-13-yl)ethanonato(2--)-N23,N24,N25,N26]-, (SP-4-2)- (9CI) (CA INDEX NAME)



IT 135241-28-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, acetal hydrolysis, and complexation of)
RN 135241-28-0 CAPLUS
CN 23H,25H-Benzo[b]porphine, 9-ethenyl-19-ethyl-8,14,18-trimethyl-13-(2-methyl-1,3-dioxolan-2-yl)- (9CI) (CA INDEX NAME)

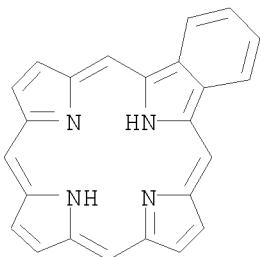


IT 135241-26-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation, ketalization, and dehydrochlorination of)
RN 135241-26-8 CAPLUS
CN Ethanone, 1-[9-(2-chloroethyl)-19-ethyl-8,14,18-trimethyl-23H,25H-
benzo[b]porphin-13-yl]- (9CI) (CA INDEX NAME)



L9 ANSWER 86 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1991:17561 CAPLUS
DOCUMENT NUMBER: 114:17561
ORIGINAL REFERENCE NO.: 114:2997a,3000a
TITLE: Pre-activated therapeutic agents derived from photoactive compounds
INVENTOR(S): Gulliya, Kirpal S.; Pervaiz, Shazib; Matthews, J. Lester; Dowben, Robert M.; Newman, Joseph T.; Forest, Edward
PATENT ASSIGNEE(S): Baylor Research Foundation, USA
SOURCE: PCT Int. Appl., 62 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

WO	9003187	A1	19900405	WO	1989-US4181	19890926
	W: AU, DK, FI, HU, JP, NO, SU					
	RW: AT, BE, CH, DE, FR, GB, IT, NL, SE					
US	5091385	A	19920225	US	1988-252256	19880930
AU	8943450	A	19900418	AU	1989-43450	19890926
AU	631142	B2	19921119			
EP	436642	A1	19910717	EP	1989-911468	19890926
EP	436642	B1	19950426			
	R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE					
JP	04501717	T	19920326	JP	1989-510674	19890926
JP	2807682	B2	19981008			
CA	1329120	C	19940503	CA	1989-613203	19890926
AT	121630	T	19950515	AT	1989-911468	19890926
US	5177073	A	19930105	US	1990-509036	19900413
US	5489590	A	19960206	US	1992-829933	19920203
PRIORITY APPLN. INFO.:				US	1988-252256	A 19880930
				WO	1989-US4181	A 19890926
				US	1990-509036	A3 19900413
AB	Photoactive neoplasm inhibitors, such as Merocyanine 540, dihematoporphyrin ether, porphyrin, benzoporphyrin, etc., are preactivated with radiation, electromagnetic or elec. energy, prior to use. Laser-activated Merocyanine 540 (40 µg/mL) was toxic to HL-60 human leukemia and L1210 murine leukemia cells, in vitro, without affecting human blood lymphocytes.					
IT	36469-17-7, 23H,25H-Benzo[b]porphine RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (neoplasm inhibitor, photoactive, preactivation of)					
RN	36469-17-7 CAPLUS					
CN	23H,25H-Benzo[b]porphine (9CI) (CA INDEX NAME)					



L9 ANSWER 87 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1990:500475 CAPLUS
 DOCUMENT NUMBER: 113:100475
 ORIGINAL REFERENCE NO.: 113:16959a,16962a
 TITLE: Preliminary characterization of porphyrins from the Gafsa Basin, Tunisia: evidence for metal-free benzo porphyrins from an immature sediment
 AUTHOR(S): Quirke, J. Martin E.; Dale, T.; Britton, Edward D.; Yost, Richard A.; Trichet, Jean; Belayouni, H.
 CORPORATE SOURCE: Dep. Chem., Florida Int. Univ., Miami, FL, 33199, USA
 SOURCE: Organic Geochemistry (1990), 15(2), 169-77

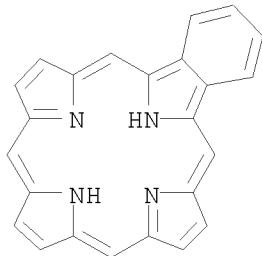
CODEN: ORGEDE; ISSN: 0146-6380

DOCUMENT TYPE: Journal
LANGUAGE: English

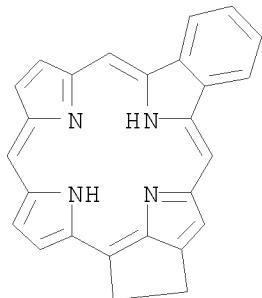
AB Five metal-free porphyrin fractions were isolated chromatog. from an immature chert of the Gafsa Basin (Paleocene, Tunisia). Each fraction was analyzed by electron ionization tandem mass spectrometry. In addition to the expected aetioporphyrin-III and deoxophylloerythroetioporphyrin (DPEP), an isomeric C32 CAP porphyrin, which probably bears an extended isocyclic ring, was also detected. A C31 CAP component bearing one unsubstituted β -position was isolated. C33 and C34 benzo-DPEP porphyrin as well as a C33 tetrahydrobenzo-DPEP porphyrin were also present, which indicates that such compds. are generated in immature sediments.

IT 36469-17-7, 23H,25H-Benzo[b]porphine 128920-36-5
 RL: GOC (Geological or astronomical occurrence); OCCU (Occurrence)
 (in immature chert, of Gafsa Basin, Tunisia)

RN 36469-17-7 CAPPLUS
 CN 23H,25H-Benzo[b]porphine (9CI) (CA INDEX NAME)

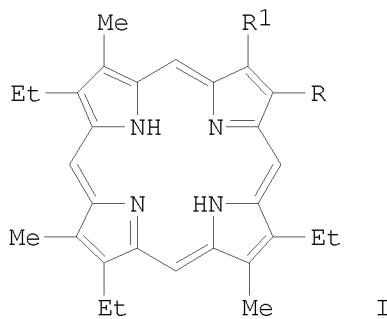


RN 128920-36-5 CAPPLUS
 CN 5,22:12,15-Diimino-20,18-metheno-7,10-nitrilobenzo[ο]cyclopent[b]azacyclononadecine, 16,17-dihydro- (9CI) (CA INDEX NAME)

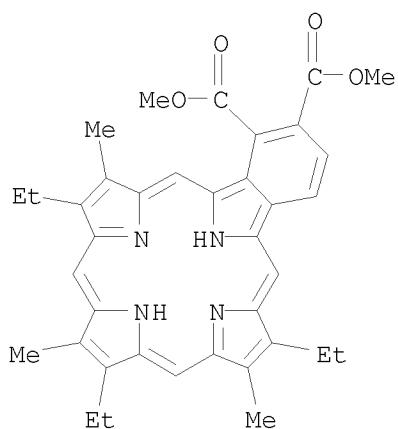


L9 ANSWER 88 OF 103 CAPPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1990:406010 CAPPLUS
 DOCUMENT NUMBER: 113:6010
 ORIGINAL REFERENCE NO.: 113:1163a,1166a
 TITLE: Transformation of a monovinylporphyrin to benzoporphyrins via Diels-Alder adducts
 AUTHOR(S): Yon-Hin, Paul; Wijesekera, Tilak P.; Dolphin, David

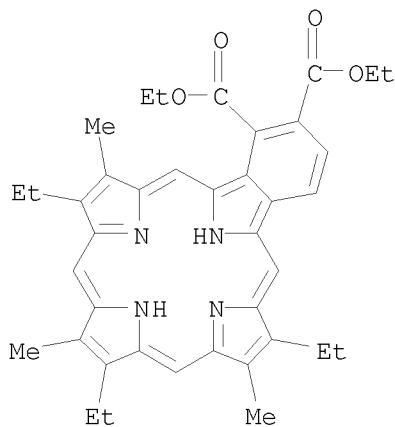
CORPORATE SOURCE: Dep. Chem., Univ. British Columbia, Vancouver, BC, V6T 1Y6, Can.
 SOURCE: Tetrahedron Letters (1989), 30(45), 6135-8
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 113:6010
 GI



- AB Vinylporphyrin I ($R = CH:CH_2$, $R^1 = H$) has been synthesized and treated with excess $RO_2CC.tplbond.CCO_2R$ ($R = Me, Et, CMe_3$) to give monobenzoporphyrins I [$RR^1 = CH:CHC(CO_2R):C(CO_2R)$] in high yield. Evidence suggests that the initial adduct isomerizes to a new porphyrin [I, $RR^1 = CH_2CH_2C(CO_2R):C(CO_2R)$] en route to the benzoporphyrin.
- IT 127640-31-7P 127640-32-8P 127640-33-9P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
- RN 127640-31-7 CAPLUS
- CN 23H,25H-Benzo[b]porphine-1,2-dicarboxylic acid,
 8,13,18-triethyl-9,14,19-trimethyl-, dimethyl ester (9CI) (CA INDEX NAME)

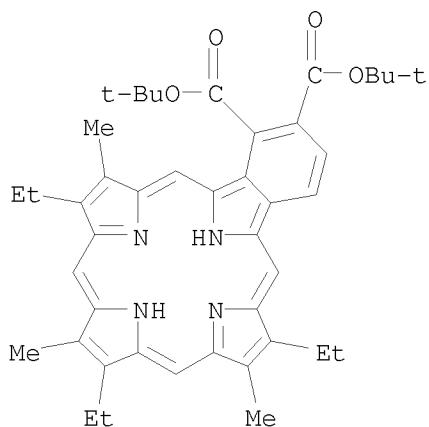


- RN 127640-32-8 CAPLUS
- CN 23H,25H-Benzo[b]porphine-1,2-dicarboxylic acid,
 8,13,18-triethyl-9,14,19-trimethyl-, diethyl ester (9CI) (CA INDEX NAME)



RN 127640-33-9 CAPLUS

CN 23H,25H-Benzo[b]porphine-1,2-dicarboxylic acid,
8,13,18-triethyl-9,14,19-trimethyl-, bis(1,1-dimethylethyl) ester (9CI)
(CA INDEX NAME)



L9 ANSWER 89 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1989:577632 CAPLUS

DOCUMENT NUMBER: 111:177632

ORIGINAL REFERENCE NO.: 111:29547a, 29550a

TITLE: The Henryville Bed of the New Albany shale - I.
Preliminary characterization of the nickel and vanadyl
porphyrins in the bitumen

AUTHOR(S): Van Berkel, Gary J.; Quirke, J. Martin E.; Filby,
Royston H.

CORPORATE SOURCE: Dep. Chem., Washington State Univ., Pullman, WA,
99164-1300, USA

SOURCE: Organic Geochemistry (1989), 14(2), 119-28

CODEN: ORGEDE; ISSN: 0146-6380

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The Ni, V, Ni(II) porphyrin and VO(II) porphyrin concns. in the bitumen of an organic rich sample of the Henryville Bed of the New Albany shale (Mississippian-Devonian; Indiana, U.S.A.) were determined. The bitumen contains 1776 µg Ni/g and 1550 µg V/g bitumen. The porphyrin concns. of 9900 µg/g and 9100 µg/g, resp., are higher than those reported in most source rock bitumens or crude oils. The similar abundances of Ni(II) and VO(II) porphyrins indicates a depositional environment being transitional between strongly anoxic (VO(II) porphyrins dominant) and less anoxic in which Ni(II) porphyrins dominate. The Ni(II) and VO(II) porphyrins in the bitumen occur as etioporphyrin (I), deoxophylloerythroetioporphyrin (DPEP), and tetrahydrobenzo-DPEP (THBD) species in the order of abundance: I > DPEP > THBD for Ni(II) and DPEP > I > THBD for VO(II) porphyrins. The DPEP/etio ratios of 1.4 for the VO(II) series and 0.91 for the Ni(II) series and a vitrinite reflectance of 0.5-0.6% are consistent with the organic matter in the New Albany shale being of intermediate maturity. The C-number distributions of the I, DPEP, and THBD porphyrins of the 2 metals are very similar. This similarity and the fact that C nos. of both Ni(II) and VO(II) porphyrins extend at least to C36 suggests that the NI(II) and VO(II) porphyrins originated via similar geochem. pathways in the New Albany shale. The major pathway was the porphyrins release during kerogen catagenesis.

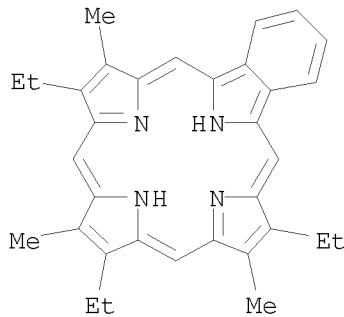
IT 93614-17-6

RL: USES (Uses)

(in bitumen, of New Albany, Indiana)

RN 93614-17-6 CAPLUS

CN 23H,25H-Benzo[b]porphine, 8,13,18-triethyl-9,14,19-trimethyl- (9CI) (CA INDEX NAME)



L9 ANSWER 90 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1989:453350 CAPLUS

DOCUMENT NUMBER: 111:53350

ORIGINAL REFERENCE NO.: 111:8997a,9000a

TITLE: In vitro photosensitization with a benzoporphyrin derivative

AUTHOR(S): Kessel, David

CORPORATE SOURCE: Sch. Med., Wayne State Univ., Detroit, MI, 48201, USA

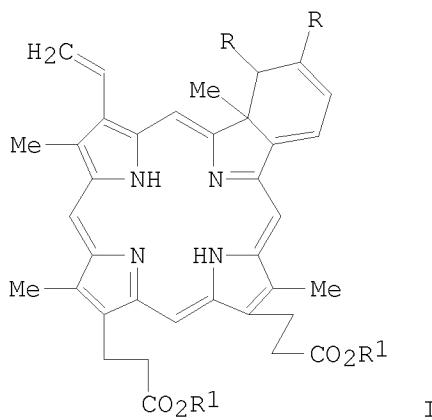
SOURCE: Photochemistry and Photobiology (1989), 49(5), 579-82

CODEN: PHCBAP; ISSN: 0031-8655

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



AB Biophys. and photobiol. properties of 2 benzoporphyrin derivs., (I, R = COOEt, R'=H or Me) were examined. These dyes exhibit substantial absorbance in the red, and are potent photosensitizers in L1210 cells. After brief (0.5 h) incubations, phototoxicity was more closely correlated with membrane than with mitochondrial photodamage. Affinity of these dyes toward plasma lipoproteins are consistent with a mode of localization via the low-d. lipoprotein-mediated mechanism utilized by HPD.

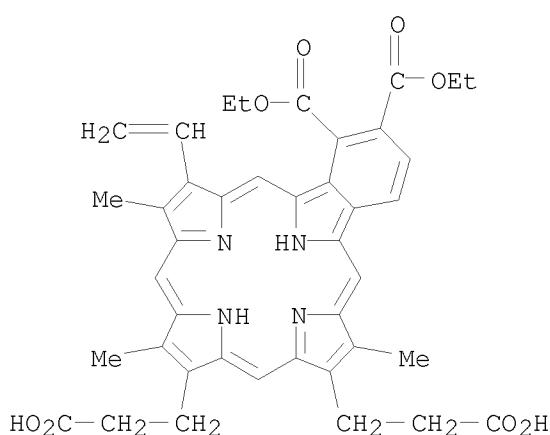
IT 121714-54-3

RL: BIOL (Biological study)

(photosensitization by, of mammalian cells with visible light,
photophys. properties in relation to)

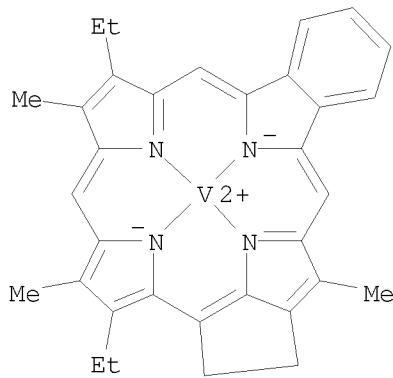
RN 121714-54-3 CAPLUS

CN 23H,25H-Benzo[b]porphine-9,13-dipropionic acid,
1,2-bis(ethoxycarbonyl)-19-ethenyl-8,14,18-trimethyl- (9CI) (CA INDEX
NAME)



L9 ANSWER 91 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1987:601590 CAPLUS

DOCUMENT NUMBER: 107:201590
ORIGINAL REFERENCE NO.: 107:32323a, 32326a
TITLE: Vanadylporphyrins in crude oil of Russian field
AUTHOR(S): Zabarova, D. Z.; Serebrennikova, O. V.
CORPORATE SOURCE: Inst. Khim. Nefti, Tomsk, USSR
SOURCE: Neftekhimiya (1987), 27(4), 435-8
CODEN: NEFTAH; ISSN: 0028-2421
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Petroleum of the Russkoe field contains 0.014 μmol/g VO porphyrins. In the vacuum distillation of this petroleum 12% of these porphyrins pass to the distillates. The variety of porphyrin structures in the bottoms is larger than in the petroleum.
IT 111256-74-7
RL: USES (Uses)
(in petroleum, fate of, in vacuum distillation)
RN 111256-74-7 CAPLUS
CN Vanadium, [8,14-diethyl-16,17-dihydro-9,13,24-trimethyl-5,22:12,15-diimino-20,18-metheno-7,10-nitrilobenzo[ο]cyclopent[b]azacyclononadecinato(2-) -N19,N23,N25,N26]-, (SP-4-2)- (9CI) (CA INDEX NAME)



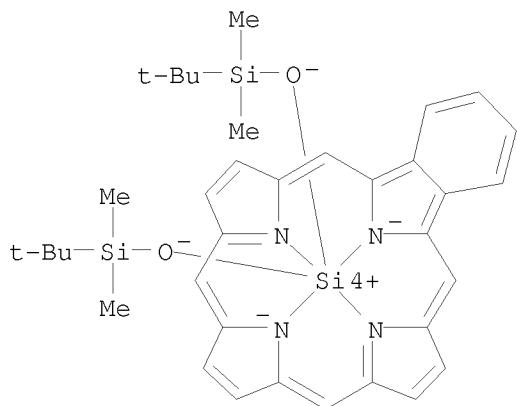
L9 ANSWER 92 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1987:52812 CAPLUS
DOCUMENT NUMBER: 106:52812
ORIGINAL REFERENCE NO.: 106:8715a, 8718a
TITLE: Comparative computerized gas chromatographic-mass spectrometric analysis of petroporphyrins
AUTHOR(S): Gill, J. P.; Evershed, R. P.; Eglinton, G.
CORPORATE SOURCE: Sch. Chem., Univ. Bristol, Bristol, BS8 1TS, UK
SOURCE: Journal of Chromatography (1986), 369(2), 281-312
CODEN: JOCRAM; ISSN: 0021-9673
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The ability of computerized gas chromatog.-mass spectrometry (C-GC-MS) to afford detailed information on petroporphyrin composition is exemplified through analyses of Boscan crude oil and La Luna shale (Maracaibo Basin, Venezuela), an oil-source rock pair. The petroporphyrins of both samples are complex mixts., comprising at least 224 and 175 compds., resp. Five structural classes already characterized, showed at least 5 pseudo-homologous series through linear Kovats' plots and co-injection.

The 2 samples are qual. and quant. very similar in composition. These related samples are compared and contrasted with an unrelated bitumen, gilsonite, examined in an earlier paper. The data showed that petroporphyrin anal. by C-GC-MS can provide classical biol. marker information, e.g. thermal maturity. This paper provides the first such comparative examination of petroporphyrins by GC-MS anal.

IT 106374-69-0D, alkyl derivs. 106397-85-7D, alkyl derivs.
 RL: ANT (Analyte); ANST (Analytical study)
 (determination of, in anal. of petroleum and shale, by computerized gas chromatog.-mass spectrometry, of Maracaibo Basin, Venezuela)

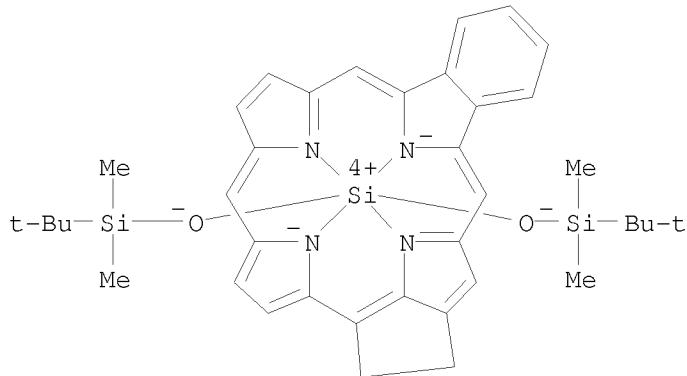
RN 106374-69-0 CAPLUS

CN Silicon, bis[(1,1-dimethylethyl)dimethylsilanolato] [23H,25H-
 benzo[b]porphinato(2-) -N23,N24,N25,N26]-, (OC-6-12)- (9CI) (CA INDEX
 NAME)



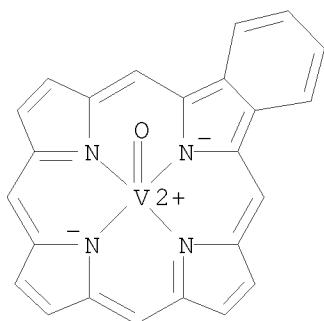
RN 106397-85-7 CAPLUS

CN Silicon, [16,17-dihydro-5,22:12,15-diimino-20,18-metheno-7,10-nitrilobenzo[o]cyclopent[b]azacyclononadecinato(2-) -N19,N23,N25,N26]bis[(1,1-dimethylethyl)dimethylsilanolato]-, (OC-6-13)- (9CI) (CA INDEX NAME)



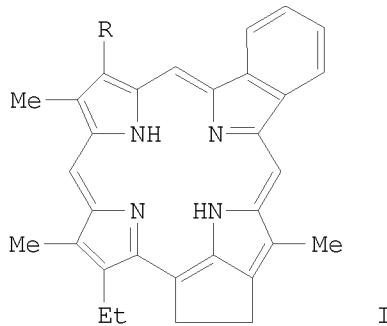
L9 ANSWER 93 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1986:431769 CAPLUS

DOCUMENT NUMBER: 105:31769
ORIGINAL REFERENCE NO.: 105:5161a, 5164a
TITLE: Oxygen electroreduction on porphyrins derived from petroleum
AUTHOR(S): Radyushkina, K. A.; Tarasevich, M. R.; Novikova, E. M.; Kublanovskii, V. S.; Antipenko, V. R.; Zemtseva, L. I.
CORPORATE SOURCE: Inst. Elektrokhim. im. Frumkina, Moscow, USSR
SOURCE: Doklady Akademii Nauk SSSR (1986), 288(2), 397-400 [Chem.]
CODEN: DANKAS; ISSN: 0002-3264
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The use of natural porphyrins as raw materials for pyrolysis to obtain catalysts for O electroredn. is considered. The pyrolysis of petroleum porphyrins deposited from raw materials can be used to obtain such catalysts which have as good or better activity than does the pyrolyzed synthetic material Co tetra(p-methoxyphenyl)-porphyrin. The electrocatalytic activity of petroleum-derived porphyrins was evaluated by measuring the steady-state polarization curves of the electroredn. of O in 1M KOH and 0.5M H₂SO₄ on floating gas-diffusion electrodes.
IT 99625-79-3
RL: CAT (Catalyst use); USES (Uses)
(catalysts, for electroredn. of oxygen)
RN 99625-79-3 CAPLUS
CN Vanadium, [23H,25H-benzo[b]porphinato(2-)N23,N24,N25,N26]oxo-, (SP-5-12)-(9CI) (CA INDEX NAME)



L9 ANSWER 94 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1986:148606 CAPLUS
DOCUMENT NUMBER: 104:148606
ORIGINAL REFERENCE NO.: 104:23513a, 23516a
TITLE: Naturally occurring benzoporphyrins: bacterial marker pigments?
AUTHOR(S): Kaur, Surinder; Chicarelli, M. Ines; Maxwell, James R.
CORPORATE SOURCE: Sch. Chem., Univ. Bristol, Bristol, BS8 1TS, UK
SOURCE: Journal of the American Chemical Society (1986), 108(6), 1347-8
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 104:148606

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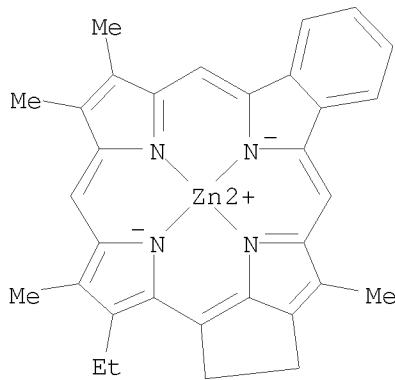
AB A C33 and a C32 monobenzo[g]porphyrin with an exocyclic ethano ring (I, R = Et, Me), each present in Boscan crude oil (Cretaceous, Venezuela) as the vanadyl complex, have been isolated as the demetalated species. Their structures have been determined by ¹H NMR spectroscopic anal. of the ZnII complexes, using decoupling and nuclear Overhauser effect expts. The origin of these compds. is unclear, but it is possible that they may have arisen from precursors related to bacteriochlorophylls-d.

IT 100813-33-0

RL: PRP (Properties)
(NMR of)

RN 100813-33-0 CAPLUS

CN Zinc, [14-ethyl-16,17-dihydro-8,9,13,24-tetramethyl-5,22:12,15-diimino-20,18-metheno-7,10-nitrilobenzo[o]cyclopent[b]azacyclononadecinato(2-) -κN19,κN23,κN25,κN26]-, (SP-4-2)- (9CI) (CA INDEX NAME)

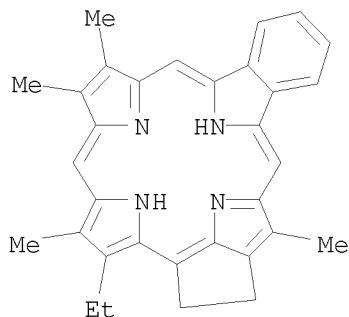


IT 100813-32-9P

RL: PREP (Preparation)
(isolation of, from petroleum, and mol. structure of)

RN 100813-32-9 CAPLUS

CN 5,22:12,15-Diimino-20,18-metheno-7,10-nitrilobenzo[o]cyclopent[b]azacyclononadecine,
14-ethyl-16,17-dihydro-8,9,13,24-tetramethyl- (9CI) (CA INDEX NAME)



L9 ANSWER 95 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1986:26086 CAPLUS

DOCUMENT NUMBER: 104:26086

ORIGINAL REFERENCE NO.: 104:4197a,4200a

TITLE: Petroleum porphyrins-electrocatalysts for cathodic oxygen reduction

AUTHOR(S): Radyushkina, K. A.; Antipenko, V. R.; Novikova, E. M.; Pevneva, G. S.; Tarasevich, M. R.; Kublanovskii, V. S.

CORPORATE SOURCE: Inst. Elektrokhim. im. Frumkina, Moscow, USSR

SOURCE: Elektrokhimiya (1985), 21(10), 1390-3

CODEN: ELKKAX; ISSN: 0424-8570

DOCUMENT TYPE: Journal

LANGUAGE: Russian

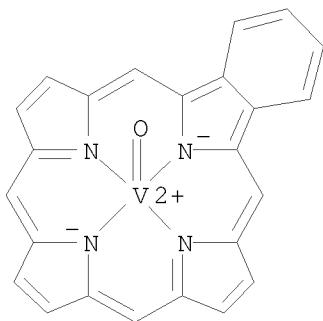
AB The possibility was studied of obtaining active catalysts for the cathodic reduction of O by pyrolysis on C of concs. of vanadyl porphyrins, deposited from crude petroleum expts. by DMF with subsequent chromatog. purification of the extract on Al2O3 and silica gel. The electrochem. measurements were carried out on floating gas-diffusion electrodes made from wetproofed C black on which a very thin layer (≤ 1 mg/cm²) of catalyst is deposited. Polarization curves were plotted of the reduction of O in of 1N KOH and 1N H₂SO₄ at 20° on the initial vanadylporphyrins, the products of their pyrolysis in a He atmospheric at 800° (30 min), the products of pyrolysis of a mixture of vanadyl porphyrins (10 weight%) and modified active C. The prospects of using natural vanadyl porphyrins for electrocatalysis of O reactions in an alkaline medium are good.

IT 99625-79-3D, derivs.

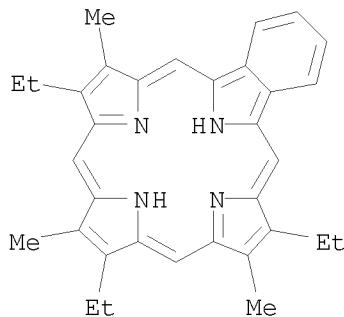
RL: PRP (Properties)
(electrocatalyst, for oxygen reduction)

RN 99625-79-3 CAPLUS

CN Vanadium, [23H,25H-benzo[b]porphinato(2-) -N23,N24,N25,N26]oxo-, (SP-5-12)- (9CI) (CA INDEX NAME)

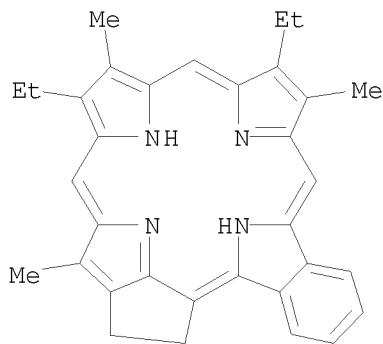


L9 ANSWER 96 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1985:72048 CAPLUS
DOCUMENT NUMBER: 102:72048
ORIGINAL REFERENCE NO.: 102:11165a,11168a
TITLE: Computerized gas chromatographic-mass spectrometric analysis of complex mixtures of alkyl porphyrins
AUTHOR(S): Marriott, P. J.; Gill, J. P.; Evershed, R. P.; Hein, C. S.; Eglinton, G.
CORPORATE SOURCE: Sch. Chem., Univ. Bristol, Bristol, BS8 1TS, UK
SOURCE: Journal of Chromatography (1984), 301(1), 107-28
CODEN: JOCRAM; ISSN: 0021-9673
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Computerized capillary gas chromatog.-mass spectrometry (GC-MS) anal. of complex mixts. of alkyl porphyrins, as their bis(trimethylsiloxy)silicon(IV) and bis(tert-butyldimethylsiloxy)silicon(IV) derivs., is described. The latter derivative is more suitable for routine GC-MS anal. This computerized GC-MS approach, when applied to the alkyl porphyrins of 2 geol. samples, a bitumen (Gilsonite, Eocene age, UT, U.S.A.) and a crude oil (Boscan, Cretaceous age, West Venezuela), has revealed the highly complex compns. of these fractions. Computer-aided data processing, using relative retention index calcns., facilitated the classification of the chromatog. peaks according to structural type and membership of pseudo-homologous series. Computerized GC-MS is compared with, and contrasted to high-performance liquid chromatog. as a means of petroporphyrin anal.
IT 93614-17-6D, bis(tert-butyldimethylsiloxy)silicon derivs.
93614-18-7D, bis(tert-butyldimethylsiloxy)silicon derivs.
RL: PRP (Properties); ANST (Analytical study)
(mass spectra of)
RN 93614-17-6 CAPLUS
CN 23H,25H-Benz[b]porphine, 8,13,18-triethyl-9,14,19-trimethyl- (9CI) (CA INDEX NAME)



RN 93614-18-7 CAPLUS

CN 7,10:17,22-Diimino-5,3-metheno-12,15-nitrilobenzo[e]cyclopent[b]azacyclononadecine, 8,13-diethyl-1,2-dihydro-9,14,26-trimethyl- (9CI) (CA INDEX NAME)



L9 ANSWER 97 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1985:61981 CAPLUS

DOCUMENT NUMBER: 102:61981

ORIGINAL REFERENCE NO.: 102:9713a, 9716a

TITLE: Ready syntheses of benzoporphyrins via Diels-Alder reactions with protoporphyrin IX

AUTHOR(S): Morgan, Alan R.; Pangka, Veronica Scherrer; Dolphin, David

CORPORATE SOURCE: Dep. Chem., Univ. British Columbia, Vancouver, V6T 1Y6, Can.

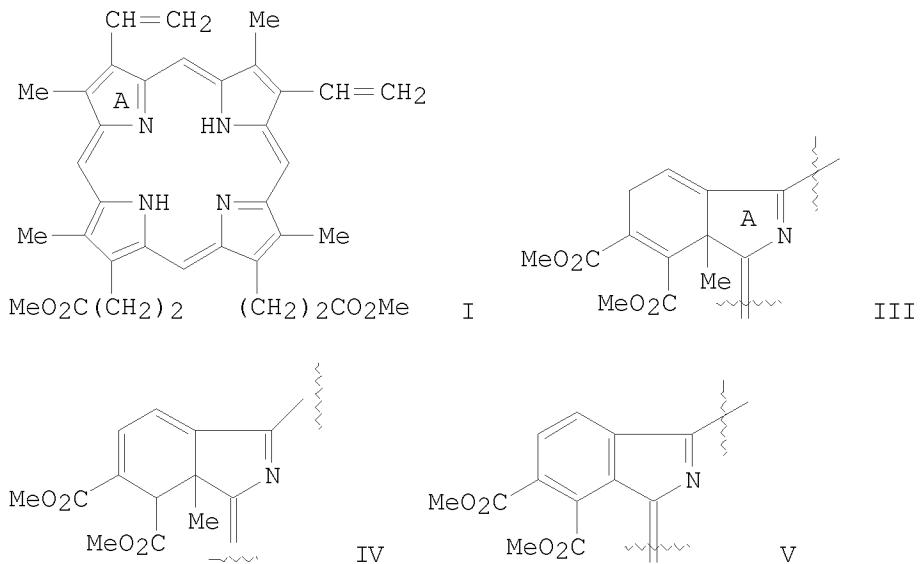
SOURCE: Journal of the Chemical Society, Chemical Communications (1984), (16), 1047-8

CODEN: JCCCAT; ISSN: 0022-4936

DOCUMENT TYPE: Journal

LANGUAGE: English

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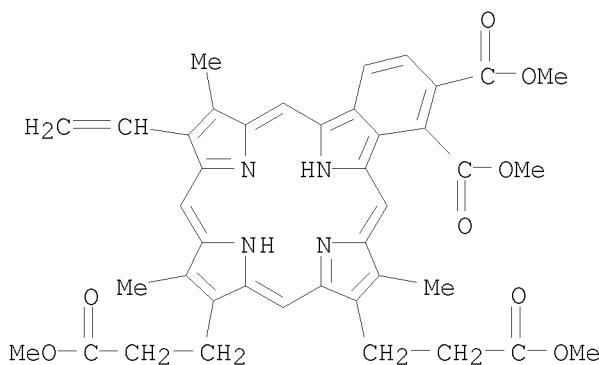
AB Protoporphyrin IX di-Me ester (I) underwent Diels-Alder reaction with strongly activated dienophiles; the resulting adducts underwent elimination of the angular Me group to give monobenzoporphyrins. E.g., reaction of I with MeO₂CC.tplbond.CCO₂Me (II) gave the adduct III, which rearranged to IV on treatment with Et₃N. IV aromatized on treatment with excess II and Et₃N to give the benzoporphyrin V.

IT 94238-26-3P 94238-28-5P 94238-34-3P
94238-36-5P 94238-37-6P 94238-42-3P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

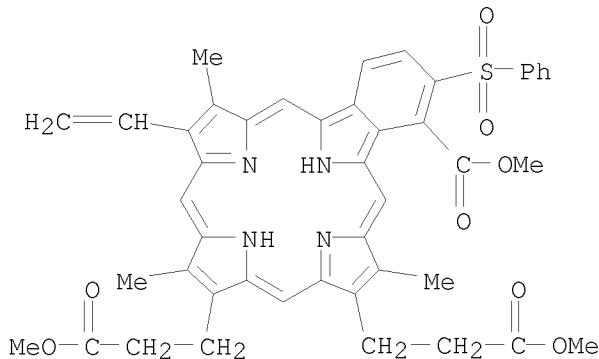
RN 94238-26-3 CAPLUS

CN 23H,25H-Benz[*b*]porphine-9,13-dipropanoic acid,
18-ethenyl-3,4-bis(methoxycarbonyl)-8,14,19-trimethyl-, dimethyl ester
(9CI) (CA INDEX NAME)



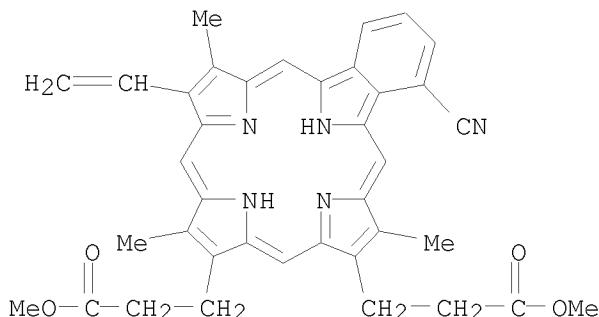
RN 94238-28-5 CAPLUS
CN 23H,25H-Benzo [b]porphine-9,13-dipropanoic acid,

18-ethenyl-4-(methoxycarbonyl)-8,14,19-trimethyl-3-(phenylsulfonyl)-, dimethyl ester (9CI) (CA INDEX NAME)



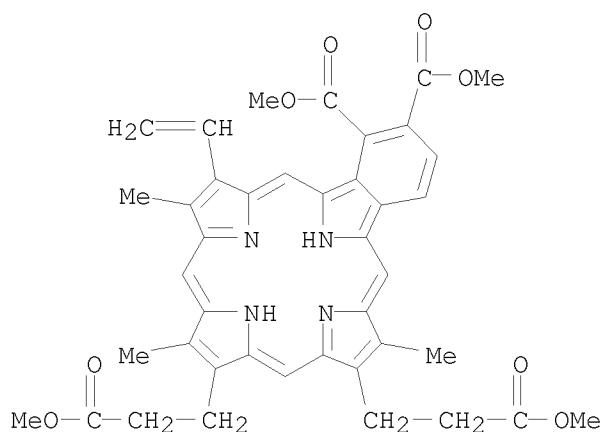
RN 94238-34-3 CAPLUS

CN 23H,25H-Benzo[b]porphine-9,13-dipropionic acid,
4-cyano-18-ethenyl-8,14,19-trimethyl-, dimethyl ester (9CI) (CA INDEX
NAME)



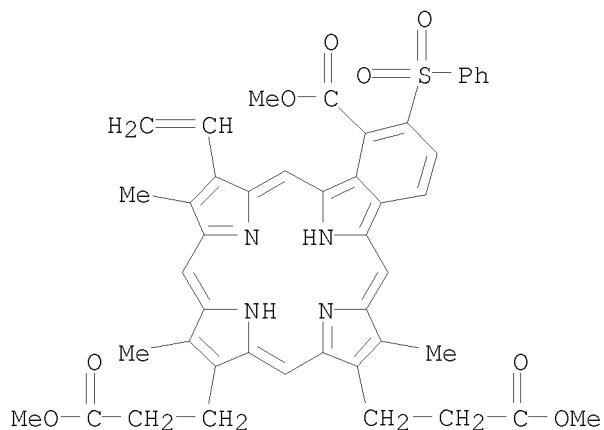
RN 94238-36-5 CAPLUS

CN 23H,25H-Benzo[b]porphine-9,13-dipropionic acid,
19-ethenyl-1,2-bis(methoxycarbonyl)-8,14,18-trimethyl-, dimethyl ester
(9CI) (CA INDEX NAME)



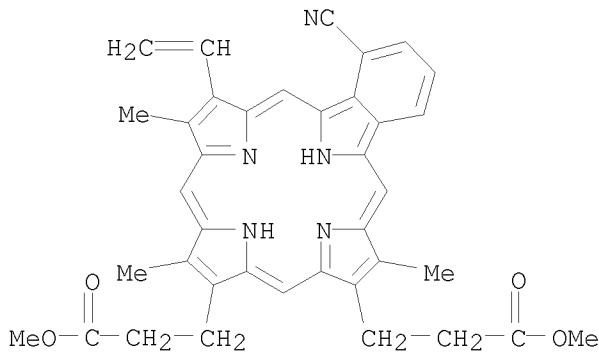
RN 94238-37-6 CAPLUS

CN 23H,25H-Benzo[b]porphine-9,13-dipropanoic acid,
19-ethenyl-1-(methoxycarbonyl)-8,14,18-trimethyl-2-(phenylsulfonyl)-,
dimethyl ester (9CI) (CA INDEX NAME)



RN 94238-42-3 CAPLUS

CN 23H,25H-Benzo[b]porphine-9,13-dipropanoic acid,
1-cyano-19-ethenyl-8,14,18-trimethyl-, dimethyl ester (9CI) (CA INDEX
NAME)



L9 ANSWER 98 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1983:34416 CAPLUS

DOCUMENT NUMBER: 98:34416

ORIGINAL REFERENCE NO.: 98:5381a,5384a

TITLE: Chemistry of pyrrolic compounds. LI. Porphyrins with electron-withdrawing groups in the same pyrrolic ring: preparation of a pyridazinoporphyryin

Chaudhry, Irshad A.; Clezy, Peter S.

CORPORATE SOURCE: Dep. Org. Chem., Univ. New South Wales, Kensington, 2033, Australia

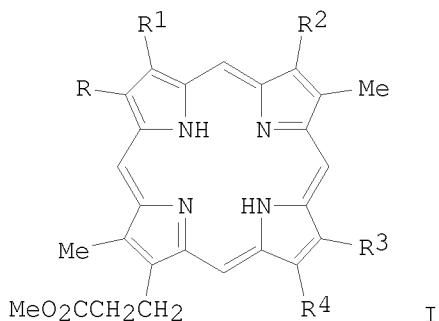
SOURCE: Australian Journal of Chemistry (1982), 35(6), 1185-201

CODEN: AJCHAS; ISSN: 0004-9425

DOCUMENT TYPE: Journal

LANGUAGE: English

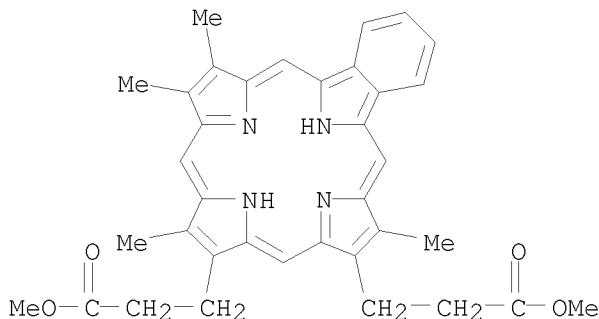
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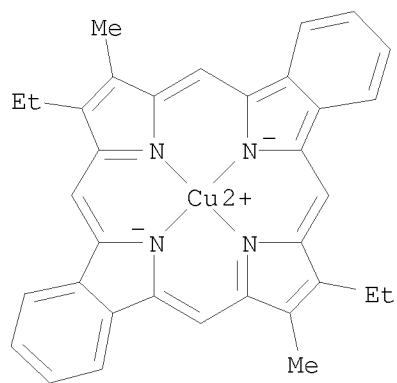
AB Porphyrins I ($R = R_1 = CH_2CH_2OH, CH_2CH_2Cl, CH:CH_2, CHO, R_2 = R_3 = Me, R_4 = CH_2CH_2CO_2Me$; $R = CHO, R_1 = CO_2Me, R = CO_2Me, R_1 = CHO, R_2 = R_3 = Me, R_4 = CH_2CH_2CO_2Me$; $R = R_1 = R_3 = R_4 = CH_2CH_2OHc, CH_2CH_2Cl, CH:CH_2, R_2 = CH_2CH_2CO_2Me$) were prepared by known methods. Oxidation of I ($R = R_1 = CH:CH_2, R_2 = R_3 = Me, R_4 = CH_2CH_2CO_2Me$) gave I' ($RR_1 = CH:NN:CH, R_2 = R_3 = Me, R_4 = CH_2CH_2CO_2Me$). I' ($RR_1 = CH:NN:CH, R_2 = R_3 = Me, R_4 = CH_2CH_2CO_2Me$) was obtained by treating I ($R = R_1 = CHO, R_1 = R_2 = Me, R_4 = CH_2CH_2CO_2Me$) with N_2H_4 .

IT 84089-93-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 84089-93-0 CAPLUS
CN 23H,25H-Benzo[b]porphine-9,13-dipropanoic acid, 8,14,18,19-tetramethyl-,
dimethyl ester (9CI) (CA INDEX NAME)

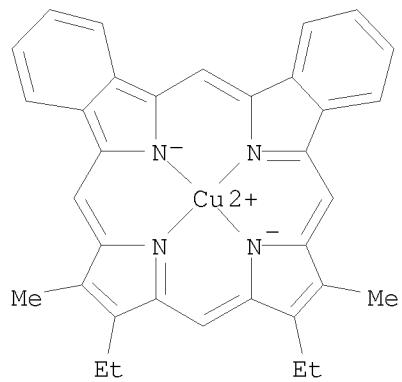


L9 ANSWER 99 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1982:406035 CAPLUS
DOCUMENT NUMBER: 97:6035
ORIGINAL REFERENCE NO.: 97:1163a,1166a
TITLE: The chemistry of pyrrolic compounds. XLIX. Further observations on the chemistry of the benzoporphyrins
AUTHOR(S): Clezy, Peter S.; Mirza, Aminul H.
CORPORATE SOURCE: Dep. Org. Chem., Univ. New South Wales, Kensington,
2033, Australia
SOURCE: Australian Journal of Chemistry (1982), 35(1), 197-209
CODEN: AJCHAS; ISSN: 0004-9425
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Isomeric dibenzoporphyrins having the fused rings attached to either adjacent or opposite pyrrolic rings have been prepared and their properties compared. The chemical of some of the intermediates encountered during the synthesis of a benzoporphyrin has been examined
IT 81923-08-2P 81923-09-3P 81966-00-9P
81976-21-8P 81976-22-9P 81976-23-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 81923-08-2 CAPLUS
CN Copper, [8,20-diethyl-9,21-dimethyl-25H,27H-dibenzo[b,l]porphinato(2-) - N25,N26,N27,N28]-, (SP-4-1)- (9CI) (CA INDEX NAME)



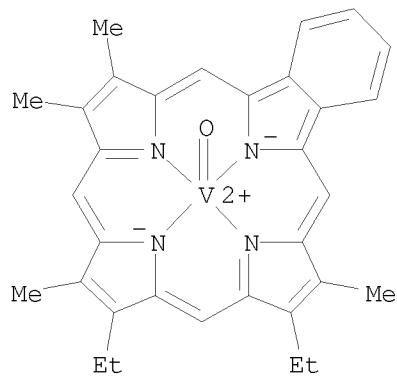
RN 81923-09-3 CAPLUS

CN Copper, [9,12-diethyl-8,13-dimethyl-25H,27H-dibenzo[b,g]porphinato(2-)-N25,N26,N27,N28]-, (SP-4-2)- (9CI) (CA INDEX NAME)

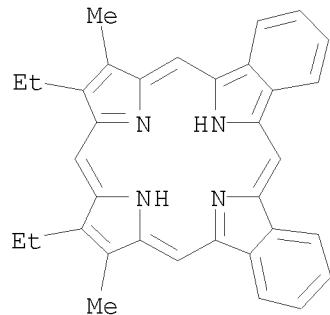


RN 81966-00-9 CAPLUS

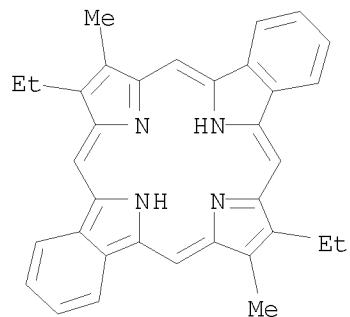
CN Vanadium, [9,13-diethyl-8,14,18,19-tetramethyl-23H,25H-benzo[b]porphinato(2-)-N23,N24,N25,N26]oxo-, (SP-5-13)- (9CI) (CA INDEX NAME)



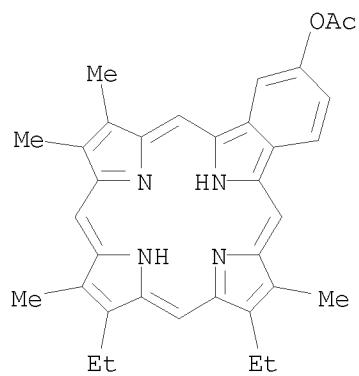
RN 81976-21-8 CAPLUS
CN 25H,27H-Dibenzo[*b,g*]porphine, 9,13-diethyl-8,14-dimethyl- (9CI) (CA INDEX NAME)



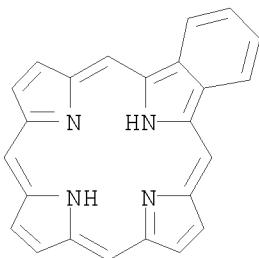
RN 81976-22-9 CAPLUS
CN 25H,27H-Dibenzo[*b,l*]porphine, 8,20-diethyl-9,21-dimethyl- (9CI) (CA INDEX NAME)



RN 81976-23-0 CAPLUS
CN 23H,25H-Benzo[*b*]porphin-2-ol, 9,13-diethyl-8,14,18,19-tetramethyl-, acetate (ester) (9CI) (CA INDEX NAME)



L9 ANSWER 100 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1982:34078 CAPLUS
DOCUMENT NUMBER: 96:34078
ORIGINAL REFERENCE NO.: 96:5629a,5632a
TITLE: MO LCAO SCF method for the calculation of magnetic characteristics of porphyrin molecules
AUTHOR(S): Vysotskii, Yu. B.; Kuz'mitskii, V. A.; Solov'ev, K. N.
CORPORATE SOURCE: Inst. Fiz.-Org. Khim. Uglekhim., Kiev, USSR
SOURCE: Zhurnal Strukturnoi Khimii (1981), 22(4), 22-30
CODEN: ZSTKAI; ISSN: 0044-4634
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The 1H, 13C and 15N NMR chemical shifts of several porphyrins were calculated from the ring currents and charge distributions, obtained by PMO calcns. with the London approximation. The π -electron ring current makes the dominant contribution to the screening of the protons. An aromaticity scale was devised on the basis of the π -electron contribution to the diamagnetic susceptibility and π -electron currents.
IT 36469-17-7
RL: PRP (Properties)
(NMR of, MO calcn. of)
RN 36469-17-7 CAPLUS
CN 23H,25H-Benzo[b]porphine (9CI) (CA INDEX NAME)



L9 ANSWER 101 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1981:539063 CAPLUS
DOCUMENT NUMBER: 95:139063
ORIGINAL REFERENCE NO.: 95:23181a,23184a
TITLE: π -Electron ring currents and magnetic properties of porphyrin molecules in the MO LCAO SCF method
AUTHOR(S): Vysotskii, Yu. B.; Kuz'mitskii, V. A.; Solov'ev, K. N.
CORPORATE SOURCE: Inst. Phys.-Org. Chem. Coal Chem., Donetsk, 340048, USSR
SOURCE: Theoretica Chimica Acta (1981), 59(5), 467-85
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The coupled variant of double-parameter perturbation theory in the MO LCAO SCF method in the London approximation was used for the calcn. of π -electron current distributions in the mols. of porphin and its derivs. The chemical shifts of 1H-NMR were computed on the basis of calcns. of ring currents and charge distributions. It is shown that π -electron ring currents are responsible for the dominant contribution to the shielding of protons. The theor. and exptl. values of proton chemical shifts are in a good

agreement. Chemical shifts of the ^{13}C and ^{15}N nuclei were also estimated Two aromaticity scales are proposed for the compds. under study based on the calcns. of the π -electron contribution to the diamagnetic susceptibility and of π -electron currents, resp.

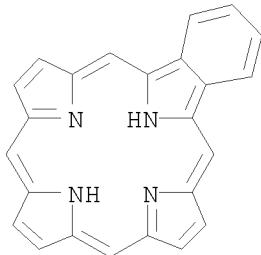
IT 36469-17-7

RL: PRP (Properties)

(π -electron ring currents and magnetic properties of, MO LCAO SCF
calcн. of)

RN 36469-17-7 CAPLUS

CN 23H,25H-Benzo[b]porphine (9CI) (CA INDEX NAME)



L9 ANSWER 102 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1978:22858 CAPLUS

DOCUMENT NUMBER: 88:22858

ORIGINAL REFERENCE NO.: 88:3673a,3676a

TITLE: The chemistry of pyrrolic compounds. XXXVII.
Monobenzoporphyrins: the rhodoporphyrin of petroleum

deposits

AUTHOR(S): Clezy, Peter S.; Fookes, Christopher J. R.; Mirza,
Aminul H.

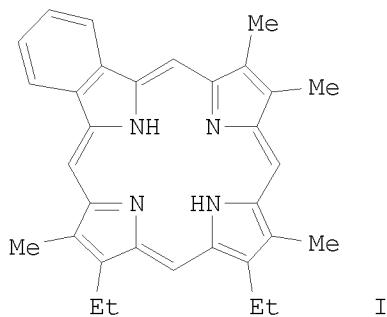
CORPORATE SOURCE: Dep. Org. Chem., Univ. New South Wales, Kensington,
Australia

SOURCE: Australian Journal of Chemistry (1977), 30(6), 1337-47
CODEN: AJCHAS; ISSN: 0004-9425

DOCUMENT TYPE: Journal

LANGUAGE: English

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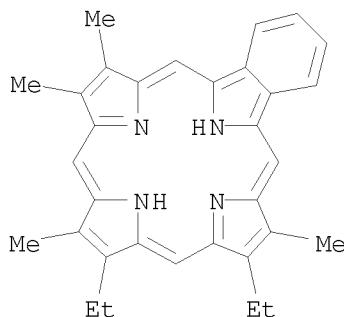


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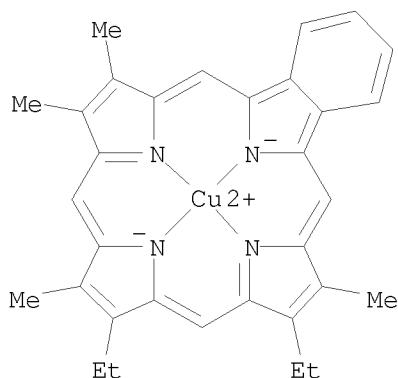
AB The monobenzoporphyrin I was prepared from porphyrin derivs. containing a fused

cyclohexanone ring. The cyclohexanone system can be constructed either before or after the porphyrin macrocycle was synthesized. The spectroscopic properties of the monobenzoporphyrin are described and these support the proposal that such a species constitutes the rhodo-type series of porphyrins which were isolated from some petroleum deposits.

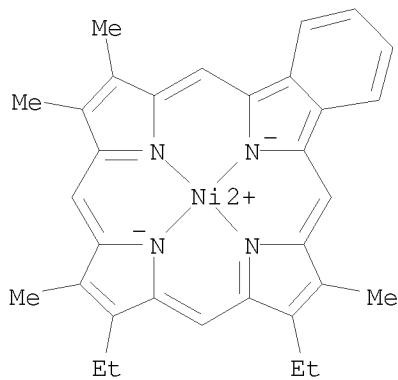
IT 65039-01-2P 65124-67-6P 65124-68-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 65039-01-2 CAPLUS
CN 23H,25H-Benzo[b]porphine, 14,18-diethyl-8,9,13,19-tetramethyl- (9CI) (CA INDEX NAME)



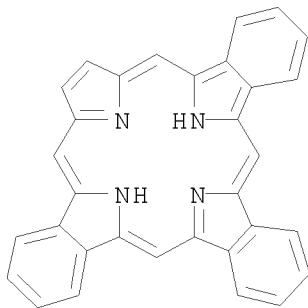
RN 65124-67-6 CAPLUS
CN Copper, [9,13-diethyl-8,14,18,19-tetramethyl-23H,25H-benzo[b]porphinato(2-)N23,N24,N25,N26]-, (SP-4-2)- (9CI) (CA INDEX NAME)



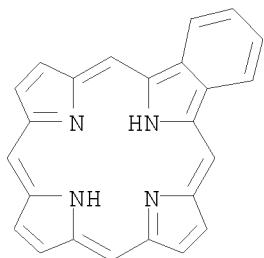
RN 65124-68-7 CAPLUS
CN Nickel, [9,13-diethyl-8,14,18,19-tetramethyl-23H,25H-benzo[b]porphinato(2-)N23,N24,N25,N26]-, (SP-4-2)- (9CI) (CA INDEX NAME)



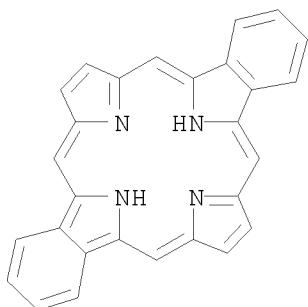
L9 ANSWER 103 OF 103 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1972:146877 CAPLUS
 DOCUMENT NUMBER: 76:146877
 ORIGINAL REFERENCE NO.: 76:23863a,23866a
 TITLE: Porphyrins. XXIV. Energy, oscillator strength, and Zeeman splitting calculations [self-consistent MO configuration interaction] for phthalocyanine, porphyrins, and related ring systems
 AUTHOR(S): McHugh, A. J.; Gouterman, Martin; Weiss, Charles, Jr.
 CORPORATE SOURCE: Dep. Chem., Univ. Washington, Seattle, WA, USA
 SOURCE: Theoretica Chimica Acta (1972), 24(4), 346-70
 CODEN: TCHAAM; ISSN: 0040-5744
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Extensive CI (configuration interaction) calcns. were made on free base porphine and the metallo derivative of porphine, tetraazaporphine, phthalocyanine, various benzoporphines, chlorine, and bacteriochlorine. The transition gradient operator gives good agreement with exptl. intensities. Free base porphine may have a weak $\pi-\pi^*$ transition around 480 nm. Tetrabenzoporphine and phthalocyanine are predicted to have much more intensity around 50,000 cm⁻¹ than porphine and tetraazaporphine due to benzenoid transitions, a prediction borne out by the available data. Magnetic effects are calculated for the low-energy excited states. Q state angular momentum is calculated to be 4.35 .plcnst. for porphine and 3.13 .plcnst. for phthalocyanine. Although these nos. agree with some exptl. results, the calcns. show that the exptl. anal. needs further refinement.
 IT 36469-16-6 36469-17-7 36547-73-6
 RL: PRP (Properties)
 (configuration interaction calcns. of, energy level, oscillator strength and Zeeman effect in relation to)
 RN 36469-16-6 CAPLUS
 CN 27H,29H-Tribenzo[b,g,l]porphine (9CI) (CA INDEX NAME)



RN 36469-17-7 CAPLUS
CN 23H,25H-Benzo[b]porphine (9CI) (CA INDEX NAME)



RN 36547-73-6 CAPLUS
CN 25H,27H-Dibenzo[b,l]porphine (9CI) (CA INDEX NAME)



=> log h		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
FULL ESTIMATED COST	ENTRY	SESSION
	561.09	1062.80
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
CA SUBSCRIBER PRICE	ENTRY	SESSION
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STN INTERNATIONAL SESSION SUSPENDED AT 11:03:00 ON 19 DEC 2008